Usenet Newsgroup Archive: rec.radio.amateur.homebrew

2003-01 - 2003-06

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Date span: 2003-01-01 through 2003-06-30

Source text: rec.radio.amateur.homebrew.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 4,414

Message records with no readable body available in the source text: 2

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 02:01:14 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212311801.6be321be@posting.google.com>
Source record: 38904

Four ideas: as mentioned elsewhere, use a CPLD; use 74AC/ACT devices
(some go to that sort of freq); use a PLL chip such as one of the
National PLLatinum series, some of which can be programmed to simply
act as a divider; use one of the ideas from www.wenzel.com:
http://www.wenzel.com/pdffiles/dividers.pdf has some interesting
thoughts for simple ways to divide freqs, esp. if the input varies
over a limited range.

Cheers,
Tom

gpatterson53@hotmail.com (gary) wrote in message
news:<9c2b8e62.0212271403.392045d6@posting.google.com>...
> How does one prescale by 10 at 2 meter frequencies these days? I can
> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?
>
> Tnx Gary W4AF

2. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 02:31:52 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <rwuQ9.9016$us1.8688@news.bellsouth.net>
Source record: 38907

Uh, didn't germanium diode have marking like that? And used in SWP/Watt meters?

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Tony" <nospam@shoveit.com> wrote in message
news:MHpQ9.74392$6H6.2787018@twister.austin.rr.com...
> It's in the HF/VHF sensor of the Diamond SX-1000 watt meter. The meter was
> hit by lightning and I'm rebuilding it. I use a 1N914 and it's not
working
> right (the meter that is) so I'm guessing that there is something special
> about it?
>
>
>
> "Tony" <nospam@shoveit.com> wrote in message
> news:T5QP9.62029$6H6.2464019@twister.austin.rr.com...
> > Can't figure out what kind of diode this is??
> >
> > Looks like a 1N914 but (glass and about the same size) BUT it has a
BLACK
> > and WHITE line on it? LIKE THIS BELOW!
> >
> > B W
> > _________
> > ---| | | |---
> > ----------------
> >
> >
> >
> >
> >
> > Sign up for Paypal and make me $5.00
> >
> > https://www.paypal.com/refer/pal=WHRP8XHRMLSX4
> >
> >
>
>

3. Re: Almost done with that regen question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 02:59:30 UTC
From: Ross <rjtucke@asu.edu>
Message-ID: <rjtucke-9EA12B.20015731122002@news.west.cox.net>
Source record: 38905

OK! I think I've finally implemented what everybody was telling me. Except, infuriatingly, I've been having a ridiculous challenge over a SIMPLE THREE-LEG circuit. What I need is the very general differential equations for the following circuit:

```
C
C-----||-----|
L C  |
C f(t)|
C*-/\/\/--0--*
C R  _|_
_|_  ///
///
```

where the C is a capacitor, the L is an inductor with the tap at 1 turn (of N total turns) above ground, the R is a resistor, and f(t) above the 0 represents a CURRENT source.

This is just a simple three leg circuit, yet because it's a current source and because the inductor will act as an autotransformer, I keep fearing that I'm messing it up...

So yes, I'm actually being blatently impertinant in that I am asking for the DEs rather than simply how to do it. I deeply appreciate your time.
Ross

4. Re: Almost done with that regen question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 07:44:35 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E129C63.6BD3@sneakemail.com>
Source record: 38906

Ross wrote:
>
> OK! I think I've finally implemented what everybody was telling me.
> Except, infuriatingly, I've been having a ridiculous challenge over a
> SIMPLE THREE-LEG circuit. What I need is the very general differential
> equations for the following circuit:
>
> C
> C-----||-----|
> L C |
> C f(t)|
> C*-/\/\/--0--*
> C R _|_
> _|_ ///
> ///
>
> where the C is a capacitor, the L is an inductor with the tap at 1 turn
> (of N total turns) above ground, the R is a resistor, and f(t) above the
> 0 represents a CURRENT source.
>
> This is just a simple three leg circuit, yet because it's a current
> source and because the inductor will act as an autotransformer, I keep
> fearing that I'm messing it up...
>
> So yes, I'm actually being blatently impertinant in that I am asking for
> the DEs rather than simply how to do it. I deeply appreciate your time.
> Ross

Well, you have a good start for a Hartley oscillator, but the current
source in series with a resistance gives the tank infinite Q. This gets
messy.

You could put the resistor in parallel with the current source, or change
the current source to a voltage source.

The impedance reflected across the tank is Rp = R * N. The resonant
frequency for usable Q's is the standard F = 1 / (2 * pi * sqrt(LC))

Then, XL = 2 * pi * F * L

and

Q = (R * N) / XL

In other words, for reasonable operating Q, R needs to be high if it is
in series with a voltage source, or low if it is in parallel with a

current source.

Another way, if you are headed towards making an oscillator, is to set XL = XC = 50 to 200 ohms, then continue from there. You'd like the Q to be as high as possible, but practical coils may range from 50 or so to over 400.

For a Hartley using a FET, tapping the coil 25% from the bottom is a good starting point. If you use bipolar, the tap should be 25% from the top.

The bipolar has a slight disadvantage since the bias circuit will be in parallel with the tank and will reduce the Q. The FET can have a bypassed source resistor and the tank can be grounded, which can result in higher Q.

Mike

5. Re: Almost done with that regen question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 08:11:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v158lfjgrrteff@corp.supernews.com>
Source record: 38908

If the current is assumed positive to the left, and I2 is the current through C, positive to the right, the Laplace transformed loop equations are:

```
V + IR - (I*Ls)*(1-N)/N^2 + I2*Ls*(1-1/N) + I2/Cs = 0
V + IR - (I*Ls)*(1-N)/N^2 + (I-I2)*Ls/N = 0
```

where I(s) is the Laplace transform of current f(t), V is the voltage across the current source, with the positive terminal to the right, and I2 is the current through the capacitor, positive to the right. These can be solved for the two unknowns V and I2.

If you're able to work directly with the differential equations, I'm sure it'll be no problem for you to perform the inverse transforms to get them.

Roy Lewallen, W7EL

Ross wrote:
> OK! I think I've finally implemented what everybody was telling me.
> Except, infuriatingly, I've been having a ridiculous challenge over a
> SIMPLE THREE-LEG circuit. What I need is the very general differential
> equations for the following circuit:
>
> C
> C-----||-----|
> L C |
> C f(t)|
> C*-/\/\/--0--*
> C R _|_
> _|_ ///
> ///
>
>
>
>
> where the C is a capacitor, the L is an inductor with the tap at 1 turn
> (of N total turns) above ground, the R is a resistor, and f(t) above the
> 0 represents a CURRENT source.
>
> This is just a simple three leg circuit, yet because it's a current
> source and because the inductor will act as an autotransformer, I keep
> fearing that I'm messing it up...
>
> So yes, I'm actually being blatently impertinant in that I am asking for
> the DEs rather than simply how to do it. I deeply appreciate your time.

> Ross

6. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 08:36:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <4ba4PdCqiqE+EA26@ifwtech.co.uk>
Source record: 38909

Tony wrote:

>> Can't figure out what kind of diode this is??
>>
>> Looks like a 1N914 but (glass and about the same size) BUT it has a BLACK
>> and WHITE line on it? LIKE THIS BELOW!
>>
>> B W
>> _________
>> ---| | | |---
>> ----------------
>>

>It's in the HF/VHF sensor of the Diamond SX-1000 watt meter. The meter was
>hit by lightning and I'm rebuilding it. I use a 1N914 and it's not working
>right (the meter that is) so I'm guessing that there is something special
>about it?
>
>

It could be an OA90 (white=9, black=0), which is a germanium diode made
by Philips or some other European manufacturer.

Germanium diodes are used in SWR meters because of their low turn-on
(threshold) voltage, which helps to give more accurate readings near the
bottom of the scale - for example when reading 'reflected power' with a
good impedance match. You don't say in what way the 1N914 "doesn't
work", but it is a silicon diode with a higher threshold voltage, which
will make the meter more reluctant to start moving up from zero.

I don't know if the OA90 is still manufactured, but a typical US-made
germanium detector diode such as the 1N82A should work OK.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

7. Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 09:36:07 UTC
From: David Huisman <dhuisman@bigpond.net.au>
Message-ID: <bEyQ9.19579$aV5.51123@news-server.bigpond.net.au>
Source record: 38910

Hi,

Please let me know if you know of where I can obtain a schematic to
construct a homebrew SINAD meter.

Thanks

Kind regards

David Huisman

8. Re: Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 11:11:55 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0101030613370001@c-66-176-144-254.se.client2.attbi.com>
Source record: 38911

In article <bEyQ9.19579$aV5.51123@news-server.bigpond.net.au>, "David Huisman" <dhuisman@bigpond.net.au> wrote:

> Hi,
>
> Please let me know if you know of where I can obtain a schematic to
> construct a homebrew SINAD meter.
>
> Thanks
>
> Kind regards
>
> David Huisman

SINAD'ers (@ 1KHz tone) are available for a very low price at the hamfests so it may be better to buy one unless your intent is to build for educational value. Also, if you know someone with a SINAD meter, go there and measure 12 db several times and after a while your ear will be able to tell you when you're within a db or so of 12 db. I haven't done a 12 db SINAD measurement in about 20 years or so, but I would be willing to bet some money on my ear to set to within 1 db easily. Of course, your application may determine that you need absolute readings for doing off channel measurements, for instance. This is a horse of a different colour.

Steve WB4CZR

9. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 11:31:00 UTC
From: Dieter Mayr <d.mayr@aon.at>
Message-ID: <3e12d174$0$22482$91cee783@newsreader02.highway.telekom.at>
Source record: 38912

"Tony" <nospam@shoveit.com> schrieb im Newsbeitrag
news:T5QP9.62029$6H6.2464019@twister.austin.rr.com...
> Can't figure out what kind of diode this is??
>
> Looks like a 1N914 but (glass and about the same size) BUT it has a
BLACK
> and WHITE line on it? LIKE THIS BELOW!
>
> B W
> _________
> ---| | | |---
> ----------------
>

Hi all!

I would think this is a 1N90 (white 9, black 0).
Aquick search says: germanium-diode.
Mayby anyone with a databook at hand can verify this and
post the data.

All the best to you in 2003
73 de OE2CDM
Dieter

10. SPICE circuit simulation (with tubes)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 11:59:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auul6e$8m0ih$1@ID-150848.news.dfncis.de>
Source record: 38913

Hi. I hardly know anything about SPICE (or electronics for that matter), but I've been tring to find stuff on the web about tube RF circuit simulation using SPICE. Not found much. Anyone know of any sites on the subject? I've seen audio tube models, but not much data for RF pentodes.

I'd like to simulate a local oscillator that uses a CV327 (EF52), and the mixer that uses a CV302 (ECH22). I won't hold my breath. :c) TIA. Rich.

11. Re: Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 12:28:29 UTC
From: dinoal7lz@aol.com
Message-ID: <20030101072829.02020.00000181@mb-mu.aol.com>
Source record: 38914

I can't recall seeing a homebrew circuit for a SINAD meter....Ramsey electronics has an inexpensive unit. Check out:

http://www.ramseyelectronics.com/cgibin/commerce.exe?preadd=action&key=sm1

Good luck!

Dino KLï¿½S/4

12. Re: POSITIVE acting spray resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 13:39:13 UTC
From: bjorn890@aol.com57304573
Message-ID: <20030101083913.11210.00000478@mb-ce.aol.com>
Source record: 38915

```
>
>Does anyone know a source ( USA ) for positive acting resist in a spray
>can. There's lots of NEGATIVE spray resist but I've not been able to
>find positive....
>
>Thanks
>
>Ted in Atlanta
>KD4EE
>

While this isn't exactly in a can, the ink in Sharpie markers acts as a
positive resist.

-----------------------------------------------
There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890
```

13. Re: SPICE circuit simulation (with tubes)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 13:44:59 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auurce$affe1$1@ID-150848.news.dfncis.de>
Source record: 38916

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:auul6e$8m0ih$1@ID-150848.news.dfncis.de...
> Hi. I hardly know anything about SPICE (or electronics for that
> matter), but I've been tring to find stuff on the web about tube RF
> circuit simulation using SPICE. Not found much. Anyone know of any
> sites on the subject? I've seen audio tube models, but not much data
> for RF pentodes.
>
> I'd like to simulate a local oscillator that uses a CV327 (EF52), and
> the mixer that uses a CV302 (ECH22). I won't hold my breath. :c) TIA.
> Rich.

Actually I'm not designing, but mainly just want to know the local osc.
output. Probably simpler to just build up the circuit, get some test
gear and measure the output. But, would be an interesting
diversion/project to use SPICE.

14. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 15:56:10 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v164colfg4vh22@corp.supernews.com>
Source record: 38917

Tony

Giving people additional data often helps. Things like "it's in a wattmeter" obviously made a lot of folks think through other alternatives. Wattmeters frequently use germanium diodes, which are fairly unusual in other services, and if you replaced a germanium diode with a 1N914 you would probably get incorrect readings, especially at lower power levels. The other connection someone made is that the color code matched "90" and discovered a 1N90 is a germanium diode. Again, without knowing it was in a wattmeter you wouldn't expect a germanium diode.

But there is some other data here, too. You said the unit was struck by lightning. Are you sure it's (only) the diode? Is the meter receiving the current it should? Perhaps the meter movement itself was munged up and the diode isn't the problem.

It's always worth validating what you think you know!

And you still haven't described what you mean by "not working right". Again, more specific behavior is likely to tickle the memory of someone reading this thread.

..

"Tony" <nospam@shoveit.com> wrote in message news:MHpQ9.74392$6H6.2787018@twister.austin.rr.com...

15. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 16:47:22 UTC
From: T <nospam@shoveit.com>
Message-ID: <uYEQ9.78345$6H6.2887343@twister.austin.rr.com>
Source record: 38918

Well in theory that all sounded pretty good, BUT I went ahead and replaced the 1N914 with a 1N90 and it didn't make any difference. Meter deflects backwards when powered up and in the forward power reading mode. It shows deflection when a transmitter is keyed but the readings are way off. Any other ideas? It's a Diamond SX-1000 (the same one I'm trying to get a schematic on).

Tony

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:v164colfg4vh22@corp.supernews.com...
> Tony
>
> Giving people additional data often helps. Things like "it's in a
> wattmeter" obviously made a lot of folks think through other alternatives.
> Wattmeters frequently use germanium diodes, which are fairly unusual in
> other services, and if you replaced a germanium diode with a 1N914 you
would
> probably get incorrect readings, especially at lower power levels. The
> other connection someone made is that the color code matched "90" and
> discovered a 1N90 is a germanium diode. Again, without knowing it was in
a
> wattmeter you wouldn't expect a germanium diode.
>
> But there is some other data here, too. You said the unit was struck by
> lightning. Are you sure it's (only) the diode? Is the meter receiving
the
> current it should? Perhaps the meter movement itself was munged up and
the
> diode isn't the problem.
>
> It's always worth validating what you think you know!
>
> And you still haven't described what you mean by "not working right".
> Again, more specific behavior is likely to tickle the memory of someone
> reading this thread.
>
> ..
>
> "Tony" <nospam@shoveit.com> wrote in message
> news:MHpQ9.74392$6H6.2787018@twister.austin.rr.com...
>
>

16. easy pc (pcb cad)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 18:54:31 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1041447547.116586@auth2.dns.griffin.net.uk>
Source record: 38920

first happy new year......

I am new to easy pc v6 and am having trouble working out how to resize crt
dia to fit A4 so I can print it..At present ots A2 size..
Any ideas??
Now I've put this post up I'll proberly see the answer myself (sods law)

tnx G0ZEN

17. building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 18:55:04 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1041447552.778877@auth2.dns.griffin.net.uk>
Source record: 38919

First of all Happy New Year.

looking to build an hf dds (mobile rig) all band (preferably general coverage.) so.....
does anyone have construction details of such a project ie. magazine/web projects.I have found a fair bit on the web, but am wondering if a kit is available for the dds (to save time) and of peoples experiences of such a project.
tnx G0ZEN

18. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 19:07:27 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <USbjdhBvxzE+EADG@ifwtech.co.uk>
Source record: 38921

T wrote:
>Well in theory that all sounded pretty good, BUT I went ahead and replaced
>the 1N914 with a 1N90 and it didn't make any difference.

I suggested it might be an OA90 (because I have some OA91s that are colour-coded in that way). I never mentioned a 1N90 - never even heard of it.

> Meter deflects
>backwards when powered up and in the forward power reading mode.

In that case the diode is connected the wrong way round.

>It shows
>deflection when a transmitter is keyed but the readings are way off.

In what way?

> Any
>other ideas?

Yes. As someone else already said, please stop drip-feeding us the information! Tell us *everything* you know, and then maybe someone can help.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

19. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 20:35:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v16k9m5rrrdh6f@corp.supernews.com>
Source record: 38922

There have been a number of kits on and off but mostly they seem to be very expensive or they disappear about the time I'm ready to buy one <g>

Sheldon Hands has several, though, and if you don't have to translate Sterling to dollars and then ship them across the pond they may not be quite as expensive to you as they are to me.

..

"zindazenda" <zen@lineisp.co.uk> wrote in message news:1041447552.778877@auth2.dns.griffin.net.uk...
> First of all Happy New Year.
>
>
> looking to build an hf dds (mobile rig) all band (preferably general
> coverage.) so.....................
> does anyone have construction details of such a project ie. magazine/web
> projects.I have found a fair bit on the web, but am wondering if a kit is
> available for the dds (to save time) and of peoples experiences of such a
> project.
> tnx G0ZEN
>
>
>
>

20. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 21:12:03 UTC
From: zindazenda <zen@NOSPAMlineisp.co.uk>
Message-ID: <1041455540.399514@auth2.dns.griffin.net.uk>
Source record: 38923

more info.....
also has to be able to band switch and have AM and FM capability also....LCD

will check out "hands" tnx
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1041447552.778877@auth2.dns.griffin.net.uk...
> First of all Happy New Year.
>
>
> looking to build an hf dds (mobile rig) all band (preferably general
> coverage.) so.....
> does anyone have construction details of such a project ie. magazine/web
> projects.I have found a fair bit on the web, but am wondering if a kit is
> available for the dds (to save time) and of peoples experiences of such a
> project.
> tnx G0ZEN
>
>
>
>

21. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 21:38:15 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v16npsh0lc6e91@corp.supernews.com>
Source record: 38924

Ian White, G3SEK wrote:
> T wrote:
>
>> Well in theory that all sounded pretty good, BUT I went ahead and
>> replaced
>> the 1N914 with a 1N90 and it didn't make any difference.

Question for the group while we are on the subject.
Is there a practical frequency limit using garden variety diodes like
1N914 and 1N4148 for such a circuit? I recently had to replace a failed
diode in my MFJ-941D and I simply used a non-descript one off of an old
boombox circuit board and it seems fine.
Of course this is hardly a lab instrument but I've always wondered just
how high in freq one should be able to rely on reasonable results?

Tnx,
Bill WX4A

22. If you are looking for a splendid simple project for 2003!...I've got one.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 21:42:06 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0301011342.135babe8@posting.google.com>
Source record: 38925

Hello all,

A very Happy New Year to you and yours.

Well, let me begin...

Every once in a blue moon I post a message explaining of my amazing one transistor FM receiver with just a 12 component count in the receiver itself!

Without compromizing for...

...sensitivity
...selectivity
...and audio output

...this little jem is doing its' job just fine!

I call it 'The Radio Shack Special', since all of the parts may be purchased their. In fact, that is why I call it by that name. No need to have to mail order and WAIT for your component(s) to come in.

When you get to the website, just scroll down until you see the words...

THE RADIO SHACK SPECIAL PROJECT

Also, under that will be stories by Pedro, Philip and Murphy about their maiden voyage of the Radio Shack Special. Do read that also...it will surely give you MORE of an incentive to find out what you are getting into.

Should this peak your interest, I am here, my friend, to help in any way that I can to make the journey come out well.

The site is at: http://braincambre500.freeservers.com

...and let the project begin!

Respectfully,

Patrick Cambre

P.S. I thank each and every one of you who took the time out to read my letter. Again, thank you.

23. Re: If you are looking for a splendid simple project for 2003!...I've got one.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 22:11:30 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v16po6hh9jcs71@corp.supernews.com>
Source record: 38926

Patrick wrote:
> Hello all,
>
> A very Happy New Year to you and yours.
>
> Well, let me begin...
>
> Every once in a blue moon I post a message explaining of my amazing one
> transistor FM receiver with just a 12 component count in the receiver
> itself!

Yes, you do!

-BM

24. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 23:00:28 UTC
From: bjorn890@aol.com57304573
Message-ID: <20030101180028.06623.00000551@mb-cj.aol.com>
Source record: 38927

>Is there a practical frequency limit using garden variety diodes like
>1N914 and 1N4148 for such a circuit?

Yes, such a diodes construction can't handle frequencies over 2.6GHz in a
practical manner all though you may get them to work.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

25. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-01 23:05:15 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <qlr61vggn8bm8spr1rleohrs7ut0u5n7lp@4ax.com>
Source record: 38928

On Tue, 31 Dec 2002 23:25:32 GMT "Tony" <nospam@shoveit.com> wrote:

>It's in the HF/VHF sensor of the Diamond SX-1000 watt meter. The meter was
>hit by lightning and I'm rebuilding it. I use a 1N914 and it's not working
>right (the meter that is) so I'm guessing that there is something special
>about it?

It might just be germanium, or a Schottky. Just be sure that the one
you try is okay at your operating frequency.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

26. Re: Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 00:28:10 UTC
From: Full Name <mike@myhome.com>
Message-ID: <cnu61v8spu23gmu0fi33s3nourcfsabhun@4ax.com>
Source record: 38929

On Wed, 01 Jan 2003 09:36:07 GMT, "David Huisman"
<dhuisman@bigpond.net.au> wrote:

>Hi,
>
>Please let me know if you know of where I can obtain a schematic to
>construct a homebrew SINAD meter.
>
>Thanks
>
>Kind regards
>
>David Huisman

I'll dig the manual to my sinadder II out and scan it. Might take a
day. I do remember it wasen't a very complicated schematic.

Kc4qn

27. Quaker Oats Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 02:49:51 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <jNNQ9.67765$Zt4.793271@twister.rdc-kc.rr.com>
Source record: 38930

(Receive only antenna for Antique Console Radios)

I'm going to turn a loop antenna on Quaker oats tube. The Idea here is to turn enough to get it resonant some where in the AM radio band, then tap off shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable capacitors to help tune the impedance.

So I hope to pick the brain trust out there to help save some time and experimentation.

One idea is to turn it from the center of the tube to one end clock wise and from the center to the other end counter clockwise center tap it and use the trim cap to cancel out the inductance. This way the currents are opposite but equal (kind of like a dipole wrapped on a oatmeal box, with each leg wound in opposite directions) I'll keep adding turns until my MFJ antenna analyzer is happy.

Another idea is to turn it from one end to the other attach ground to one end and then start tapping from the other end for AM and SW bands use the trim capacitors as needed to cancel inductance.

Anyone out there have any experience with this? Any other construction techniques?

Jim Hilins

Reply to
ka4upw@wi.rr.com

28. Re: Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 03:34:14 UTC
From: Full Name <mike@myhome.com>
Message-ID: <upc71vkn8cb3itqj9bkpe8c3gandg8ofom@4ax.com>
Source record: 38931

On Wed, 01 Jan 2003 09:36:07 GMT, "David Huisman"
<dhuisman@bigpond.net.au> wrote:

>Hi,
>
>Please let me know if you know of where I can obtain a schematic to
>construct a homebrew SINAD meter.
>
>Thanks
>
>Kind regards
>
>David Huisman
>

I'll dig out the manual to my sinnader II and scan it. Might take a
day.

Kc4qn

29. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 03:49:01 UTC
From: Karl <null_dev@earthlink.net>
Message-ID: <3E130EBB.10002@earthlink.net>
Source record: 38932

That sounds interesting, but...
If you wind the two legs in opposite directions, the two loaded-dipole coils could generate voltages out of phase with each other - possibly cancelling at the feedpoint.
You can use a single-turn loop with a large amount of capacitance, or a multiple-turn loop with less capacitance, or even a loop wound on a ferrite core as most portable AM radios use. However you make it, a loop will be a highly directional antenna, with a narrow bandwidth.
I'd guess your second idea will be more successful.
However, the antique radios I've seen already have well-designed loop antennas mounted inside. They were usually made to be used with a random wire antenna, to be attached to a fahnstock clip or screw terminal somewhere on the back of the radio. The longer the wire, and the better the ground connection, the better those old receivers worked.

NG7F

30. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 07:31:04 UTC
From: phil <just_rtfm@yahooREMOVE.com>
Message-ID: <v17qkcs1tl1821@corp.supernews.com>
Source record: 38933

hi James:

for BCB you may consider building a box loop. these are big antennas [some make them using a hula hoop] requiring a large value variable capacitor. antenna directionality is key to good BCB reception. loops allow you to pull in a station of interest while nulling out interfering ones as well as local noise. a space saving option would be to build a larger ferrite loop. regen is also an option. look at this link...

http://www.frontiernet.net/~jadale/Loop.htm

regards,
phil :)

31. Re: If you are looking for a splendid simple project for 2003!...I've got one.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 08:27:44 UTC
From: whagen6@cs.com
Message-ID: <20030102032744.18798.00000452@mb-ft.news.cs.com>
Source record: 38934

are you sure this is just a one transister rig? I bet there are more
transisters inside the op amp ic.

32. Re: easy pc (pcb cad)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 09:36:10 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <av1hcqnpp1@news5.svr.pol.co.uk>
Source record: 38937

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1041447547.116586@auth2.dns.griffin.net.uk...
> first happy new year......
>
> I am new to easy pc v6 and am having trouble working out how to resize crt
> dia to fit A4 so I can print it..At present ots A2 size..
> Any ideas??
> Now I've put this post up I'll proberly see the answer myself (sods law)

Ctrl-P to get Plotting and Printing dialogue, then Windows button to check
you have the correct printer selected, then Run button. This should output
the schematic to your printer, properly scaled to A4.

Email me if you still have problems.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

33. What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 13:48:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3e13b3ad.39808021@news.online.no>
Source record: 38935

Happy New Year, OMs!

In an article found in CQ from late 50's about Hammarlund SP-200 it was mentioned to 'do madam Sorensen on the receiver'. But I have really no idea to know what it means, only that it is probably Madam S&#65533;rensen to use the correct spelling.

73
Jan-Martin
LA8AK

http://www.laud.no/la6nca/LA8AK/
--
remove ,xnd to reply

34. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 13:59:18 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <WAXQ9.69522$Zt4.815380@twister.rdc-kc.rr.com>
Source record: 38936

Thanks Phil,
Ill take a look at it.

I should have mentioned that the antenna is for the inside of a large
console (1930's Radio)
Jim

"phil" <just_rtfm@yahooREMOVE.com> wrote in message
news:v17qkcs1tl1821@corp.supernews.com...
> hi James:
>
> for BCB you may consider building a box loop. these are big antennas [some
> make them using a hula hoop] requiring a large value variable capacitor.
> antenna directionality is key to good BCB reception. loops allow you to
pull
> in a station of interest while nulling out interfering ones as well as
local
> noise. a space saving option would be to build a larger ferrite loop.
regen
> is also an option. look at this link...
>
> http://www.frontiernet.net/~jadale/Loop.htm
>
> regards,
> phil :)
>
>
>

35. Ext. battery pack for Yaesu vx5r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 15:59:24 UTC
From: Daniel <daniel@chan.net>
Message-ID: <av1nkr$b2o1@imsp212.netvigator.com>
Source record: 38938

Ext. battery pack for Yaesu vx5r

I want to build a battery pack for my vx5r, but need to clarify something
before go ahead.

Q1. will ext battery damage the vx5r if I connect the battery pack for
several hours and with 50% time of signal transmission ?
Q2. what is best voltage supply(e.g. 6/12v from lead-acid type or
7.2/9.6v from series of 1.2v cell) to vx5r ?
Q3. which type is the better, lead-acid or NiCd/NiMh cell ?

Tks
D

36. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 17:16:04 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0301020916.789aa9f5@posting.google.com>
Source record: 38939

"zindazenda" <zen@NOSPAMlineisp.co.uk> wrote in message
news:<1041455540.399514@auth2.dns.griffin.net.uk>...
> more info.....
> also has to be able to band switch and have AM and FM capability also....LCD
>
> will check out "hands" tnx

Sheesh. You don't want much, do you?

This is a *big* project, even before the mobile require-
ment. Are you absolutely sure you want to do this?

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

37. HP182 as 50 or 75MHz oscilloscope and HP8558A spectrum analayser plug-in unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 17:52:44 UTC
From: la8ak.xnd@online.no
Message-ID: <3e147361.88891530@news.online.no>
Source record: 38940

Happy New Year!

Discovered that one of my HP182C scopes has vertical amplifier 1801A
and it is marked 50MHz, while the other has type 1808A and it is
marked 75MHz.

Wonder if somebody knows what the difference is and whether the old
unit may be modified for 75MHz ? I have access to the manuals*, but
believe it is for the 1801A type only.

Also have 8558A (w/manual). Believe it was a modification to be done
for use with the spectrum analyser, some of the controls on the upper
right does seem to function properly as they are today.

Jan_Martin, LA8AK

http://www.laud.no/la6nca/LA8AK/
--
remove ,xnd to reply

38. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 17:52:57 UTC
From: la8ak.xnd@online.no
Message-ID: <3e1477df.90042040@news.online.no>
Source record: 38941

On Thu, 26 Dec 2002 23:37:51 -0800, Mike Monett
<z06hgto001@sneakemail.com> wrote:

>> You probably only need 5V or less to bias it off. Particularly if the
>> oscilllator is keyed, it is no advantage to have high voltage, so a
>> voltage divider is the best

>You are dead on! I looked at the specs for 6AU6WA the on Frank's tube
>site http://www.mif.pg.gda.pl/homepages/frank/vs.html
>
>The grid #1 voltage for Ib = 10uA is -4.2 to -6.5V.
>
>You have a very good memory. I haven't touched one of those since about
>1967!

Just estimation. Experimented with different rigs to achieve good CW
keying where the tube were not biassed too much out of the active
region and using a voltage divider such that 6146B's har higher
negative bias at KEY-UP than 12BY7 and 6AU6.
FT-902 keys only 12BY7A and 2x6146B, I modified the rig in '88, and
have got ufb reports on the keying. Also modified with fb reports
TR-7010, FT-221R, IC-202, FT-101B. Modified the HX-20, but it was soon
wrecked, on the other hand it was an interesting experiment which
added to the experience, so no problem, it is just part of fun with
the hobby.

It is not important whether the anode current is 10 or 20µA, it won't
probably not oscillate even when current is 0.5mA. So it really depend
on the coupling in the oscillator. Perhaps you need only a few volts
KEY-UP-voltage.

73 es happy new year!
Jan-Martin, LA8AK
--
remove ,xnd to reply

39. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 18:10:50 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <jkv81v8dml1e9cad7mc49bocob9bvq97cd@4ax.com>
Source record: 38942

On Tue, 31 Dec 2002 13:46:52 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>"David Findlay" <david@davsoft.com.au> wrote in message
>news:qu7Q9.13637$aV5.35056@news-server.bigpond.net.au...
>> I was planning on using a PIC chip with 5
>> 7-segment LED display for the frequency.
<Snip>>
>Also, take a look at some of the TI parts. The TRF4400, TRF4900, TRF2050,
>and TRF2052 include both the DDS and the PLL, and are a whale of a lot
>cheaper than the AD parts, plus they are available. AD parts are tough to
>get other than as samples (and I view that as a little dishonest in that I
>don't intend to buy a thousand of them).
<Snip>
I have to jump in here & explain Analog Devices sample policy.
We deliberately make up to 2 samples available of many of our ICs.
Do not consider using this facility as dishonest.
I was involved (along with some other AD employees who happen to also
be radio amateurs) in discussing how to set up this facility in the
1st place.
1 reason for my involvement was down to the UK (RSGB) magazine
publishing a number of homebrew articles that used our parts.
The admin costs of sending samples by any other means , or indeed of
getting payment & processing orders for 1 or 2 parts, outweigh the
cost to ADI of the free sample service we now provide.
It is deliberately intended as much for amateurs , hi-fi experimenters
and hobbyists as it is for real customers with a commercial production
project in mind.
We sold the process to our "bean counters" by pointing out the
excellent PR that should spin off from this - quite a few professional
engineers are also hobbyists and quite a few young hobbyists evolve to
become pro-engineers.

73 de Chris Muriel, G3ZDM (Field Applications Engineer for AD)
.

40. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 19:09:57 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E148FCD.80808@attbi.com>
Source record: 38944

Mike,
If you think Ad parts are hard to gettry Maxim, Great chips, but on
eternal back order.
Bill Higdon
Mike Monett wrote:
> chrisdot muriel wrote:
>
> [...]
>
>
>>>AD parts are tough to get other than as samples (and I view that as a little dishonest
in that I
>>>don't intend to buy a thousand of them).
>>
>
>><Snip>
>
>
>>I have to jump in here & explain Analog Devices sample policy.
>>We deliberately make up to 2 samples available of many of our ICs.
>>Do not consider using this facility as dishonest.
>
>
>>I was involved (along with some other AD employees who happen to also
>>be radio amateurs) in discussing how to set up this facility in the
>>1st place.
>
>
>>1 reason for my involvement was down to the UK (RSGB) magazine
>>publishing a number of homebrew articles that used our parts.
>
>
>>The admin costs of sending samples by any other means, or indeed of
>>getting payment & processing orders for 1 or 2 parts, outweigh the
>>cost to ADI of the free sample service we now provide.
>
>
>>It is deliberately intended as much for amateurs , hi-fi experimenters
>>and hobbyists as it is for real customers with a commercial production
>>project in mind.
>
>
>>We sold the process to our "bean counters" by pointing out the
>>excellent PR that should spin off from this - quite a few professional

>>engineers are also hobbyists and quite a few young hobbyists evolve to
>>become pro-engineers.
>>
>>73 de Chris Muriel, G3ZDM (Field Applications Engineer for AD)
>
>
> Chris, I thank you for convincing management to provide free samples.
> This has often helped decide which chip to use.
>
> But is there any truth to the observation that samples are easier to get
> than production quantities? I have heard the same comment before in other
> newsgroups.
>
> Mike

41. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 19:38:18 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v195aheevrce7e@corp.supernews.com>
Source record: 38945

Chris

Thank you very much for that clarification. As someone else who works in a large company, I understand how expensive it can be to process a small order, and knowing that amateurs were part of the intent of that sample process certainly helps.

And in response to Mike, I get the impression that the parts are available in production qualities, it's just that the hobbyist distributor network is a little weak. The parts certainly show up in lots of things.

..

"chrisdot muriel" <muriel@analogdot.com> wrote in message news:jkv81v8dml1e9cad7mc49bocob9bvq97cd@4ax.com...

42. HP 8405 Vector Voltmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 19:59:13 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <lS0R9.206042$qF3.14575@sccrnsc04>
Source record: 38847

There was a thread a couple of weeks ago from someone needing 8405 probes.
If they are still needed, please drop me an E-mail.

W4ZCB

43. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 20:14:12 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <u2691vk7pjeravptcbirh30vr9963dp3b9@4ax.com>
Source record: 38848

On Thu, 02 Jan 2003 13:50:55 -0800, Mike Monett
<z06hgto001@sneakemail.com> wrote:

>chrisdot muriel wrote:
>
>[...]
>
>>> AD parts are tough to get other than as samples (and I view that as a little dishonest
in that I
>>>don't intend to buy a thousand of them).
>
>> <Snip>
>
>> I have to jump in here & explain Analog Devices sample policy.
>> We deliberately make up to 2 samples available of many of our ICs.
>> Do not consider using this facility as dishonest.
>
>> I was involved (along with some other AD employees who happen to also
>> be radio amateurs) in discussing how to set up this facility in the
>> 1st place.
>
>> 1 reason for my involvement was down to the UK (RSGB) magazine
>> publishing a number of homebrew articles that used our parts.
>
>> The admin costs of sending samples by any other means, or indeed of
>> getting payment & processing orders for 1 or 2 parts, outweigh the
>> cost to ADI of the free sample service we now provide.
>
>> It is deliberately intended as much for amateurs , hi-fi experimenters
>> and hobbyists as it is for real customers with a commercial production
>> project in mind.
>
>> We sold the process to our "bean counters" by pointing out the
>> excellent PR that should spin off from this - quite a few professional
>> engineers are also hobbyists and quite a few young hobbyists evolve to
>> become pro-engineers.
>>
>> 73 de Chris Muriel, G3ZDM (Field Applications Engineer for AD)
>
>Chris, I thank you for convincing management to provide free samples.
>This has often helped decide which chip to use.
>
>But is there any truth to the observation that samples are easier to get
>than production quantities? I have heard the same comment before in other

>newsgroups.
>
>Mike
Not as such. There is a complex matrix of priorities to try to satisfy the needs of individuals, small companies & "blue chip" ones (or "Tier 1" customers if you prefer).
It is a deliberate policy to try to make **some** samples available even when products are in short supply ; sometimes the shortage is caused by a Tier 1 customer who happens to have a poor forecasting/planning system also.
If samples aren't available, we lose out in the all important "design-in" period irrespective of whether the sample request is for a key customer or a smaller one ; we will not always recognise the large-potential ones anyway as so many large companies now either contract out some of their designs or employ contract workers for some or all of the design process.
Added to this , most semiconductor companies' attempts to answer questions relating to promised delivery times (against orders or requests) are likely to be woefully inaccurate. I have lost count of the number of times I have checked out on behalf of a worried customer why they have been quoted (for example) 4 months to get a couple of ICs when we have several thousand sitting in a warehouse somewhere in the world - and I know the same happens with our competitors too.
This boils down to a mixture of poor/late data entry , incompatible software logistics and/or production systems, inefficient data query systems and similar nightmares. I assume other industries have comparable problems but I only know about ours ICs).

Please don't cry too much for me though - I enjoy the technical side and try not to get involved in commercial or logistics issues (but we do get dragged into them at times).

Apologies for taking the original (laudable) thread OT
This lot should really be under its own separate heading.

73 de G3ZDM , Applications Engineer , Analog Devices.
Try www.analog.com/dds and www.analog.com/pll for some more on topic applications notes etc.

44. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 20:19:23 UTC
From: averyfineman@aol.com
Message-ID: <20030102151923.06557.00000580@mb-cj.aol.com>
Source record: 38849

In article <v16npsh0lc6e91@corp.supernews.com>, Bill M
<don'tspamme-exray@caribe.net> writes:

>Question for the group while we are on the subject.
>Is there a practical frequency limit using garden variety diodes like
>1N914 and 1N4148 for such a circuit? I recently had to replace a failed
>diode in my MFJ-941D and I simply used a non-descript one off of an old
>boombox circuit board and it seems fine.
>Of course this is hardly a lab instrument but I've always wondered just
>how high in freq one should be able to rely on reasonable results?
>
>Tnx,
>Bill WX4A

45. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 20:25:37 UTC
From: averyfineman@aol.com
Message-ID: <20030102152537.06557.00000581@mb-cj.aol.com>
Source record: 38850

In article <v16npsh0lc6e91@corp.supernews.com>, Bill M
<don'tspamme-exray@caribe.net> writes:

>Ian White, G3SEK wrote:
>> T wrote:
>>
>>> Well in theory that all sounded pretty good, BUT I went ahead and
>>> replaced
>>> the 1N914 with a 1N90 and it didn't make any difference.
>
>Question for the group while we are on the subject.
>Is there a practical frequency limit using garden variety diodes like
>1N914 and 1N4148 for such a circuit? I recently had to replace a failed
>diode in my MFJ-941D and I simply used a non-descript one off of an old
>boombox circuit board and it seems fine.
>Of course this is hardly a lab instrument but I've always wondered just
>how high in freq one should be able to rely on reasonable results?

While they aren't rated, one clue is the switching speed in
on-off time specs...the shorter those are, the higher the
frequency. Semiconductor folks tend to get rather arty on
"majority and minority carrier storage" terms to define an
upper frequency limit. Not much help there.

Len Anderson

46. What is this device?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 21:44:46 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e14b08e.35259457@news.freeserve.net>
Source record: 38852

While disassembling a floppy disk drive motor I came across 3 devices inside the motor case on the motor coil pcb. They have 4 legs and are very small, plastic encapsulated beasties but no ID marking. I think they might be Hall Effect Sensors, but I can only find 3 leg HE sensors described on the web.

Anyone know what they are.. and how to use 'em ?

Many Thanks, Happy New Year etc..
Mike W, G8NXD qthr

47. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 21:50:55 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E14B43F.45F5@sneakemail.com>
Source record: 38943

chrisdot muriel wrote:

[...]

>> AD parts are tough to get other than as samples (and I view that as a little dishonest in that I
>>don't intend to buy a thousand of them).

> <Snip>

> I have to jump in here & explain Analog Devices sample policy.
> We deliberately make up to 2 samples available of many of our ICs.
> Do not consider using this facility as dishonest.

> I was involved (along with some other AD employees who happen to also
> be radio amateurs) in discussing how to set up this facility in the
> 1st place.

> 1 reason for my involvement was down to the UK (RSGB) magazine
> publishing a number of homebrew articles that used our parts.

> The admin costs of sending samples by any other means, or indeed of
> getting payment & processing orders for 1 or 2 parts, outweigh the
> cost to ADI of the free sample service we now provide.

> It is deliberately intended as much for amateurs , hi-fi experimenters
> and hobbyists as it is for real customers with a commercial production
> project in mind.

> We sold the process to our "bean counters" by pointing out the
> excellent PR that should spin off from this - quite a few professional
> engineers are also hobbyists and quite a few young hobbyists evolve to
> become pro-engineers.
>
> 73 de Chris Muriel, G3ZDM (Field Applications Engineer for AD)

Chris, I thank you for convincing management to provide free samples.
This has often helped decide which chip to use.

But is there any truth to the observation that samples are easier to get
than production quantities? I have heard the same comment before in other
newsgroups.

Mike

48. Re: What is this device?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 21:52:33 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Bw2R9.416078$GR5.132837@rwcrnsc51.ops.asp.att.net>
Source record: 38853

> While disassembling a floppy disk drive motor I came across 3 devices
> inside the motor case on the motor coil pcb. They have 4 legs and are
> very small, plastic encapsulated beasties but no ID marking. I think
> they might be Hall Effect Sensors, but I can only find 3 leg HE
> sensors described on the web.
>
> Anyone know what they are.. and how to use 'em ?

If they're black and shiny on one face with a bevelled edge opposite the edge with the leads, they are IR detectors. If that matches your discription, I'm pretty sure I can give you the pinout.

W4ZCB

49. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 22:35:11 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E14BE9F.631E@sneakemail.com>
Source record: 38946

Bill Higdon wrote:
>
> Mike,
> If you think Ad parts are hard to gettry Maxim, Great chips, but on
> eternal back order.
> Bill Higdon

Yes, I've heard horror stories of sudden product cancellations without prior notice. People also complain about dealing with Linear Technology.

Motorola dumped their entire RF line last year, and cut the notice time in half. MaCom supposedly picked up the line, but who knows what problems a new vendor will encounter? Fortunately, Philips carries some equivalents, such as the PBR941 to replace the MMBR941.

Just wait till the economy picks up again. Many of the good parts will go on allocation, and everyone will be screaming about not being able to make their ship deadlines.

Mike

50. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 22:36:27 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <pnb91v4mn6o1k2o5fvs8ug4ni5b6ol3j4b@4ax.com>
Source record: 38854

On Thu, 02 Jan 2003 19:09:57 GMT, Bill Higdon <w.higdon@attbi.com>
wrote:

>If you think Ad parts are hard to gettry Maxim, Great chips, but on
>eternal back order.

Yes, I agree that Maxim are making very nice chips (at least on paper)
that could be used in many amateur radio projects. However, I have
often wondered, how on earth are they able to produce so many new
chips every month as indicated by their monthly newsletters. At least
I have the impression that the company is much smaller than the giants
like Intel, TI or Motorola with huge R&D departments.

If I understood a recent Maxim newsletter correctly, they are able to
produce multiple chips on a single wafer, which would be nice for
producing a small number of samples, but this would also explain why
it is so hard to get any production volumes.

Unfortunately I have the feeling that they and some other chip
manufacturers are actually waiting for some firm orders before
starting the actual production of a specific chip.

Paul OH3LWR

51. Re: What is this device?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-02 22:57:52 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e14c31f.687666@news.freeserve.net>
Source record: 38855

On Thu, 02 Jan 2003 21:52:33 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>
>
>> While disassembling a floppy disk drive motor I came across 3 devices
>> inside the motor case on the motor coil pcb. They have 4 legs and are
>> very small, plastic encapsulated beasties but no ID marking. I think
>> they might be Hall Effect Sensors, but I can only find 3 leg HE
>> sensors described on the web.
>>
>> Anyone know what they are.. and how to use 'em ?
>
>If they're black and shiny on one face with a bevelled edge opposite the
>edge with the leads, they are IR detectors. If that matches your
>discription, I'm pretty sure I can give you the pinout.
>
>W4ZCB
>
>
Thanks Harold. I've posted a scan of the beast on my website.

www.qsl.net/m3msm/files/wotzit.gif (58k)

the scale along the top and right side is 1/32"
(one thirtytooth of an inch)

It would be nice if it was an opto device ;-).. just what I need.

atb Mike W

52. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 00:18:13 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E14D6C5.353E@sneakemail.com>
Source record: 38851

chrisdot muriel wrote:

[...]

> Not as such. There is a complex matrix of priorities to try to
> satisfy the needs of individuals, small companies & "blue chip" ones
> (or "Tier 1" customers if you prefer).

> It is a deliberate policy to try to make **some** samples available
> even when products are in short supply ; sometimes the shortage is
> caused by a Tier 1 customer who happens to have a poor
> forecasting/planning system also.

> If samples aren't available, we lose out in the all important
> "design-in" period irrespective of whether the sample request is for a
> key customer or a smaller one ; we will not always recognise the
> large-potential ones anyway as so many large companies now either
> contract out some of their designs or employ contract workers for some
> or all of the design process.

> Added to this , most semiconductor companies' attempts to answer
> questions relating to promised delivery times (against orders or
> requests) are likely to be woefully inaccurate. I have lost count of
> the number of times I have checked out on behalf of a worried customer
> why they have been quoted (for example) 4 months to get a couple of
> ICs when we have several thousand sitting in a warehouse somewhere in
> the world - and I know the same happens with our competitors too.

> This boils down to a mixture of poor/late data entry , incompatible
> software logistics and/or production systems, inefficient data query
> systems and similar nightmares. I assume other industries have
> comparable problems but I only know about ours ICs).
>
> Please don't cry too much for me though - I enjoy the technical side
> and try not to get involved in commercial or logistics issues
> (but we do get dragged into them at times).
>
> Apologies for taking the original (laudable) thread OT
> This lot should really be under its own separate heading.
>
> 73 de G3ZDM , Applications Engineer , Analog Devices.
> Try www.analog.com/dds and www.analog.com/pll for some more on topic
> applications notes etc.

Your information is not off-topic by any means. I'll take good info
wherever I can get it:)

Thanks for the reply - it may help pry some parts loose when deliveries are slow.

Mike

53. Anybody receive letter from ARRL with Freq Measureing Test results?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 00:30:13 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <rvl91vonhmkqrgpkrmnl7pdub4uan3vvm1@4ax.com>
Source record: 38856

On Dec 12, ARRL says they would "... send out letters with the results prior to Christmas to everyone who participated,". I participated and mailed in my results, but have received no such letter. Anybody get one? What are the results? Anybody know why it is still such a big secret (no numbers on the ARRL web site)? They comment on the accuracy of the entries, so they obviously have decided what the acrtual freqs were.

http://www.arrl.org/news/stories/2002/12/12/2/

Jerry W4UK

--
To reply, remove space in je flanders@comcast.net

54. fs: Kenwood TK880 TK780 Radio Program Adapter/Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 00:36:05 UTC
From: piper tweet <nospamatthistimethanks@yahoo.com>
Message-ID: <3E14DAF5.1FAF8754@yahoo.com>
Source record: 38763
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Hello there,

I've got a programming adapter - cable for the Kenwood TK880 & TK780 radios to sell. I use the kpg49d software and have at... bought this one from an online dealer less than a six months ago for over $100 by the time the postage/shipping smoke cleared. But when your in the field and in a hurry, you have to get the job done asap.

This adapter might also work on similar series models, i.e. the 800 & 900 Mhz units, of which I have none myself. This unit is in great (near new) condition, not a home-brew perf board prototype unit often seen on Ebay.

So this near new programming adapter/cable unit is for sale for $55 and a few bucks postage.
Figure $60 will get it to your door USPS with delivery confirmation.

Please take the NOSPAMPLEASE out of my Email address below, after you've cut and pasted it into your Email program to contact me. If you reply direct to this post, notice the whacky header above to reduce spam.

Thanks and I'll be happy to answer any related questions you have. I have an all positive 625 plus Ebay feedback rating, same as my Email address if you need easy references.

cheers
skipp

skipp@pilotNOSPAMPLEASE.ucdavis.edu

http://sonic.ucdavis.edu

55. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 00:42:19 UTC
From: novatech@eskimo.com
Message-ID: <av2m9b$dc8$1@eskinews.eskimo.com>
Source record: 38857

Bill Higdon <w.higdon@attbi.com> writes:

>Mike,
>If you think Ad parts are hard to gettry Maxim, Great chips, but on
>eternal back order.
>Bill Higdon
>Mike Monett wrote:
>> chrisdot muriel wrote:
>>

Popular parts are sometimes very hard to get. Distributors often
take advantage of this and jack the pricing.

However, if you often need small to medium quantities (<100 pieces) you
should sign up for buy-online. You get a good ship date and book price
on the parts.

I use a lot of AD parts, and have only had a couple of problems over the
years.

Steve

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

56. Re: easy pc (pcb cad)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 01:00:13 UTC
From: zindazenda <zen@NOSPAMlineisp.co.uk>
Message-ID: <1041607548.723560@auth2.dns.griffin.net.uk>
Source record: 38875

yeap thats it

have to use scaling to get it to fit

tnx
"Leon Heller" <leon@heller123.freeserve.co.uk> wrote in message
news:av1hcqnpp1@news5.svr.pol.co.uk...
>
> "zindazenda" <zen@lineisp.co.uk> wrote in message
> news:1041447547.116586@auth2.dns.griffin.net.uk...
> > first happy new year......
> >
> > I am new to easy pc v6 and am having trouble working out how to resize
crt
> > dia to fit A4 so I can print it..At present ots A2 size..
> > Any ideas??
> > Now I've put this post up I'll proberly see the answer myself (sods law)
>
> Ctrl-P to get Plotting and Printing dialogue, then Windows button to check
> you have the correct printer selected, then Run button. This should output
> the schematic to your printer, properly scaled to A4.
>
> Email me if you still have problems.
>
> 73, Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>
>

57. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 02:11:50 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e14ed87.2190696@news.cantech.net.au>
Source record: 38859

On Thu, 02 Jan 2003 19:09:57 GMT, Bill Higdon <w.higdon@attbi.com>
wrote:

>
>Mike,
>If you think Ad parts are hard to gettry Maxim, Great chips, but on
>eternal back order.

There appear to be a number of facets to the availability problem.
Factory MOQ is an easily understood concept, but many down-line
distributors nowadays are afraid to warehouse most chips from outfits
like Maxim and LT - they simply don't want to tie up cash in "flavour
of the month" chips which could be dead stock inside 12 months.

Unfortunately, factory MOQ's are set from one point of view only, and
I suspect that there is a (mistaken?) belief at the fab house that
distributors do in fact warehouse and therefore offer MOQ's lower than
fcatory MOQ. [All bets are off when SMD or other tape/reel-mount
components are under discussion.]

Using my own example for Maxim, the local dist here in Western
Australia is Arrow. Because of this lack of warehousing, all orders
go back up the food chain through Arrow Australia to Arrow US and back
to Maxim. They schedule a production batch when there is enough
ordered quantity to justify a run.

Sometimes, this system defeats the best intentions of the chip maker,
and sample quantities may not suffice. We had occasion to produce a
proto batch of 20 Li-Ion chargers using the MAX1737. Factory (and
therefore Arrow) MOQ was too high. Sample quantities were too low.
We eventually located an offshore distributor who HAD actually
warehoused the chip, and we were able to purchase in 50 quantities
off-the-shelf.

Who is responsible for the poor availability? I believe the factory
rationale is reasonable, with a view to economy of production and
supply. I also believe that the down-line distributors need to
warehouse and break FMOQ quantities down so that chips will move.
Apart from places like Farnell and RadioSpares, there aren't many
warehousers out there breaking FMOQ's. Even with a price for singles
at five times the reel quantity, Farnell do provide a much needed
service to startups.

58. Re: HP182 as 50 or 75MHz oscilloscope and HP8558A spectrum analayser plug-in unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 02:18:43 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.187e92e041e478229896aa@192.168.42.131>
Source record: 38858

In article <3e147361.88891530@news.online.no>, la8ak.xnd@online.no
says...

<snip>

> Wonder if somebody knows what the difference is and whether the old
> unit may be modified for 75MHz ?

While it may be possible, in some way, to expand the bandwidth on
the 50MHz unit, it is unlikely that doing so will be easy, cheap, or even
worth the effort given the age of the equipment, parts availability, etc.
In fact, if you look at the date codes on the parts for the two plug-ins,
you will probably see that they differ by some number of years.

In short; HP probably used very different designs for both the
plug-ins. I know Tektronix certainly did for theirs. You'd probably be
better off just looking for another 75MHz plug-in at whatever ham swap or
electronic surplus place(s) are close to you, or perhaps on Ebay.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

59. Re: Homebrew SINAD meter schematics required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 02:21:29 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <drmdnTpQVvo0bomjXTWQlg@News.GigaNews.Com>
Source record: 38860

Hi,

A SINAD meter is usually nothing much more than a standard audio power meter with a switchable 1kHz notch filter at the input.

Cheers - Joe, G3LLV

60. final tubes for Kenwood TS-820

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 03:44:42 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <KG7R9.211765$qF3.14658@sccrnsc04>
Source record: 38861

Sorry, this may be slightly offtopic for this group, but it's the best fit I found...

I got a Kenwood TS-820.It works perfectly fine, but I would like to get a set of final tubes -- just in case. The manual says they are of the type "S2001A", but I can not find this type-number anywhere online. Does anybody know if that is the real type, and where I can get them? Or is there a replacement type that is easier to come by?

thanks for your help

73 de Juerg, N0PP

61. Re: final tubes for Kenwood TS-820

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 04:01:58 UTC
From: Bob Weiss <bob.weiss@verizon.net>
Message-ID: <3E150B3B.2070809@verizon.net>
Source record: 38862

Juerg Tschirren wrote:
> Sorry, this may be slightly offtopic for this group, but it's the best fit I
> found...
>
> I got a Kenwood TS-820.It works perfectly fine, but I would like to get a
> set of final tubes -- just in case. The manual says they are of the type
> "S2001A", but I can not find this type-number anywhere online. Does anybody
> know if that is the real type, and where I can get them? Or is there a
> replacement type that is easier to come by?
>
> thanks for your help
>
> 73 de Juerg, N0PP
>

The S-2001 can be replaced with the much more common 6146B.
Neutralization adjustment will probably be required.

73,
Bob Weiss N2IXK

62. Negative feedback around VHF Solidstate amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 04:50:25 UTC
From: Kevin <rfman@xtra.co.nz>
Message-ID: <3E151691.7B01ACE2@xtra.co.nz>
Source record: 38863

Does anyone have any information relating to negative feedback around VHF transistor amplifiers. I have a copy of a circuit relating a Lunar Electronics Amp and it appears to have negative feedback optimised for AF. In the distant past I remember seeing a spectral plot of two amplifiers(One with and one without this feedback) and the -ve feedback amp appeared to be better.

Thanks

Kevin
ZL1UJG

63. Re: What is this device?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 04:59:19 UTC
From: The Ronney's <pronney@sprynet.com>
Message-ID: <av35dm$h9v$1@slb6.atl.mindspring.net>
Source record: 38874

Hi Mike.

I can't tell from the picture you posted but I'm pretty sure that it is a Hall Effect sensor.

The three terminal Hall sensors have built in amplifiers and Schmitt trigger, plus a voltage regulator and output stage.
The four terminal type are just the Hall element alone. Called 'Naked Hall Effect" sensors by some.
The motor is most likely a three phase DC brushless type and there will be a brushless controller chip that receives the signals from these sensors and drives the motor phases. The amplifiers, voltage regulator and Schmitt trigger will be built into the controller chip.
If you trace the wiring, you should see (assuming these are 'Naked" Hall Effect sensors) two of the pins of each wired in series. That wasn't very clear: Imagine Xmas tree lights in series. Anyway, the current flows through one set of pins and a differential signal is generated across the other two.

Oh, and why the sensors? To detect the position of the rotor of the motor to properly time the commutation of the windings.

Martin, WB6YMI

Mike W <mike@corn2.freeserve.co.uk> wrote in message news:3e14b08e.35259457@news.freeserve.net...
> While disassembling a floppy disk drive motor I came across 3 devices
> inside the motor case on the motor coil pcb. They have 4 legs and are
> very small, plastic encapsulated beasties but no ID marking. I think
> they might be Hall Effect Sensors, but I can only find 3 leg HE
> sensors described on the web.
>
> Anyone know what they are.. and how to use 'em ?
>
> Many Thanks, Happy New Year etc..
> Mike W, G8NXD qthr
>

64. MRF 476 transistor - Help !

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 06:57:46 UTC
From: Jaros&#65533;aw Misiak <jmisiak@opole.oip.pl>
Message-ID: <av3c97$ce5$1@news.tpi.pl>
Source record: 38864

Hello. Some days ago I made a big mistake with my qrp radio :-(.
Now I must repleace PA transistor MRF 476. I have problem to buy this one
in Poland so I am looking for any companion outside my country with possible
to pay by my Visa or Mastercard and delivery this via mail to Poland. I will
glad for any help !
73! in New Year
Jarek sp6ojk

65. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 08:35:59 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <PXbR9.25507$p_6.2107743@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38866

I had run into that scenerio when I was working at my last employer. I had ordered some reels of new products from Maxim, only to be told two months later that they had a bad run. When they offerred me an alternate new part that still had to be put throught its initial test, I decided to go along with Analog Devices instead.

Pete

66. ZA-1A balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 12:31:54 UTC
From: Daniel <bv2cj@seed.net.tw>
Message-ID: <av3vrk$767$1@news.seed.net.tw>
Source record: 38867

Hi, I am looking for Bencher ZA-1A balun.
That was my first balun ten years ago.
Where I can order it today?

--
Daniel
bv2cj@seed.net.tw

67. Re: ZA-1A balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 13:12:51 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E1588EC.C5252B54@verizon.net>
Source record: 38868

Daniel wrote:

> Hi, I am looking for Bencher ZA-1A balun.
> That was my first balun ten years ago.
> Where I can order it today?
>
> --
> Daniel
> bv2cj@seed.net.tw

A quick Google search under bencher will give you the answer

Dale W4OP

68. Toshiba S-AV22A RF Power Slab

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 14:02:51 UTC
From: G4BXD@qsl.net
Message-ID: <3e159752.494898@news.compuserve.com>
Source record: 38869

Toshiba S-AV22A RF Power Slab

does anyone have info, freq, power, availability, price ?

many thanks. Ben G4BXD

69. HAMTRONICS schematics needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 14:14:40 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <kVgR9.12319$9N5.1160575@newsread2.prod.itd.earthlink.net>
Source record: 38870
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hi,

I am in need of Hamtronics schematics for the 28mhz. to 432mhz. and
222mhz. transverters.
THANKS

70. Re: MRF 476 transistor - Help !

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 14:19:04 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <sZgR9.413501$pN3.46563@sccrnsc03>
Source record: 38871

"Jaros&#65533;aw Misiak" <jmisiak@opole.oip.pl> wrote in message
news:av3c97$ce5$1@news.tpi.pl...
> Hello. Some days ago I made a big mistake with my qrp radio :-(.
> Now I must repleace PA transistor MRF 476. I have problem to buy this one
> in Poland so I am looking for any companion outside my country with
possible
> to pay by my Visa or Mastercard and delivery this via mail to Poland. I
will
> glad for any help !
> 73! in New Year
> Jarek sp6ojk
>
> Address Communications Concepts Inc in Xenia Ohio. They take Major credit cards and stock the 476. Last price I have is under $5. They have a web site at www.Communications-concepts.com

W4ZCB

71. Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 14:33:04 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <SxyHttKg8ZF+Ew4D@fslife.co.uk>
Source record: 38873

Greenweld, Mainline and Display Electronics cannot help.

Maybe someone here has something or can recommend other surplus sources for a SMPS PCB with universal AC input and 13.8v DC out at 2A. Either a fixed output voltage or a 15v psu with voltage adjust pot.

I require several hundred of these, at least.

How much do I wish to pay?

Answer, not a lot.

Pound, euro's or dollars talk.

I don't mind importing if the price is right.

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

72. Re: final tubes for Kenwood TS-820

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 14:39:57 UTC
From: joe <joe.e@l.net>
Message-ID: <SghR9.5$5%5.26040@news.uswest.net>
Source record: 38872

it is a 6146b tube the number you listed it the kenwood part number, must be the original tubes?

"Juerg Tschirren" <juerg-tschirren@uiowa.edu> wrote in message news:KG7R9.211765$qF3.14658@sccrnsc04...
> Sorry, this may be slightly offtopic for this group, but it's the best fit I
> found...
>
> I got a Kenwood TS-820.It works perfectly fine, but I would like to get a
> set of final tubes -- just in case. The manual says they are of the type
> "S2001A", but I can not find this type-number anywhere online. Does anybody
> know if that is the real type, and where I can get them? Or is there a
> replacement type that is easier to come by?
>
> thanks for your help
>
> 73 de Juerg, N0PP
>

73. Re: Orcad Capture Lite? Schematic drawing software.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 16:05:00 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.187f54834eeb7bad9896ae@192.168.42.131>
Source record: 38876
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <9b8b1vs2sd23amlea077i0k040fs7l8m3j@4ax.com>,
artky1k@uninets.net says...

<snippety>

Word of free advice; Please don't post (or cross-post) plain-text
messages to any of the alt.binaries.* hierarchy. Those groups are
intended only for binary file dumps, and your message will likely get
either lost in the noise or outright cancelled.

Now, with that said...

> The info I found indicated that the Orcad Capture software was
> availabe free on a CD offered by Orcad. It's supposed to be a top
> shelf pcb design and schematic editing software package for Windows.

Frankly, I think the older DOS version did a better job. Anyway,
yes, OrCAD is considered, at least by OrCAD marketdroids, to be a 'top-
shelf' package.

However, only the 'Demo' (30-day time limit) version is free. The
unlocked version costs many thousands of $$.

You may be better off with Eagle, CircuitMaker/TraxMaker,
Electronics Workbench, or other less-expensive packages. OrCAD is aimed
at the professional engineering and commercial manufacturing markets, and
is most definitely priced accordingly. I know of very few hams who use it
on a personal basis.

Try some of these links.

http://www.cadsoft.de/ (for Eagle)

http://www.electronicsworkbench.com/

http://www.microcode.com/ (for CircuitMaker/TraxMaker)

The only caution I would add, in reference to Microcode's products,
is that they were bought out by Protel/Altium several years ago. Protel
pulled this stunt because they, apparently, couldn't write a SPICE
simulator to save their bacon. Rather than do it right on their own, they
pulled a Billy-Boy Gates by buying out someone else who already had.

It is my belief that the CircuitMaker/TraxMaker product pair has
suffered significantly, in terms of both support and future development,
as a result of this unholy partnership. This is because Protel (now
Altium) markets a high-end EDA package of their own.

If they let the lower-end packages get too good, people will start favoring them over the more expensive stuff. I did not see any significant advantage to "upgrading" from my older CircuitMaker/TraxMaker ver. 6/PRO product to the current '2000' series. In fact, based on the bug reports and complaints I learned about later for the 2000 series, this turned out to be a very wise decision.

Things may have improved by now. I don't know. I've not had any contact with the company for some time. I do know that user complaints and bug reports, both for the older and newer product (and even, in some cases, for the high-end Protel 99SE package) used to be met with lukewarm marketing-type responses at best, or stony silence at worst. The latter was certainly the case with some of the reports I made.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

74. Re: Voice frequency bandwidth and optimun TX SSB Audio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 16:14:54 UTC
From: joe <joe.e@l.net>
Message-ID: <TFiR9.18$5%5.47943@news.uswest.net>
Source record: 38877

I would say to eliminate the unknowns, as you can. What I mean is, find someone with a kenwood hand mic for that rig.. try it, and see if the audio is still "harsh" also if this is on the higher bands, 12 m and up, you may need a better ground, you may be getting rf into your audio section... make sure you have a good earth ground to the back...

Vern
KD8XY

> Andrew VK3BFA <ablight@alphalink.com.au> wrote in message
> news:1fc7b362.0212150557.576601e3@posting.google.com...
> > Maybe someone ahs already done this, and can supply a reference. My
> > query is in response to on air comments tonight after a break of many
> > years from HF operating - a junkyard TS440 I fixed as an exercise, an
> > old junkbox CB mike wired to it. Received audio reports were OK, ie
> > Q5, But "harsh" - obviously an unknown microphone, my voice is fairly
> > deep, resulting in non optimum transmit audio.
> >
> > Is it possible with simple test gear to
> > 1. Plot the bandwidth/frequency response of ones voice
> > 2. Tailor the microphone output response to match this curve.
> >
> > Any comments appreciated.
> >
> > 73 de VK3BFA Andrew
>
>

75. Re: SPICE circuit simulation (with tubes)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 16:16:50 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <SHiR9.234721$a8.131565@news4.srv.hcvlny.cv.net>
Source record: 38878

Hi,

Even with a simulation coming up with the output level of a typical sine wave oscillator is pretty tough.

Most approaches wind up being

1) I know this current (or voltage) is = X
2) I simulate the circuit
3) I adjust the simulation so the current (or voltage) is right
4) I read off the output when the simulation is running that way

The problem is that if you don't already know the magic current or voltage level you are stuck. Knowing the magic level pretty much implies that you have the circuit running in front of you.

Take Care!

Bob Camp
KB8TQ

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:auurce$affe1$1@ID-150848.news.dfncis.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:auul6e$8m0ih$1@ID-150848.news.dfncis.de...
> > Hi. I hardly know anything about SPICE (or electronics for that
> > matter), but I've been tring to find stuff on the web about tube RF
> > circuit simulation using SPICE. Not found much. Anyone know of any
> > sites on the subject? I've seen audio tube models, but not much data
> > for RF pentodes.
> >
> > I'd like to simulate a local oscillator that uses a CV327 (EF52), and
> > the mixer that uses a CV302 (ECH22). I won't hold my breath. :c) TIA.
> > Rich.
>
> Actually I'm not designing, but mainly just want to know the local osc.
> output. Probably simpler to just build up the circuit, get some test
> gear and measure the output. But, would be an interesting
> diversion/project to use SPICE.
>

76. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 16:34:56 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <QYiR9.234731$a8.172000@news4.srv.hcvlny.cv.net>
Source record: 38879

Hi,

This data is from the last time I did one of these - something like 40 years ago so it may be a little off :)

Your best bet is to space wind the wire on the tube. If you use number 24 to 28 gauge wire put about three or four wire diameters between each turn. Fill half to 2/3 of the tube with turns. The idea is more turns = more signal.

As you wind it scotch tape may be helpful to keep it all in place.

Once the winding is done varnish it in place. Almost any urethane varnish will do just fine.

To get into the radio wrap a few turns of insulated wire on top of the main winding. Make sure the turns are all in the same direction.

You can resonate the coil over the entire BC band and it will work fairly well. Getting up to short wave will be a problem. The losses in the coil will more or less eat you alive.

You will probably need a couple hundred pf to get it to resonate on the low end of the band.

One helpful resource for some of this is http://www.btinternet.com/~g4fgq.regp/ . Reg has a lot of cute little programs to quickly calculate things like what the net inductance will be.

Take Care!

Bob Camp
KB8TQ

"James Hilins" <jhilins@wi.rr.com.REMOVE> wrote in message news:jNNQ9.67765$Zt4.793271@twister.rdc-kc.rr.com...
> (Receive only antenna for Antique Console Radios)
>
> I'm going to turn a loop antenna on Quaker oats tube. The Idea here is to
> turn enough to get it resonant some where in the AM radio band, then tap off
> shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable
> capacitors to help tune the impedance.
>
> So I hope to pick the brain trust out there to help save some time and
> experimentation.
>
> One idea is to turn it from the center of the tube to one end clock wise and

> from the center to the other end counter clockwise center tap it and use
the
> trim cap to cancel out the inductance. This way the currents are opposite
> but equal (kind of like a dipole wrapped on a oatmeal box, with each leg
> wound in opposite directions) I'll keep adding turns until my MFJ antenna
> analyzer is happy.
>
> Another idea is to turn it from one end to the other attach ground to one
> end and then start tapping from the other end for AM and SW bands use the
> trim capacitors as needed to cancel inductance.
>
> Anyone out there have any experience with this? Any other construction
> techniques?
>
> Jim Hilins
>
> Reply to
> ka4upw@wi.rr.com
>
>

77. Re: Anybody receive letter from ARRL with Freq Measureing Test results?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 16:40:50 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <m2jR9.234734$a8.82639@news4.srv.hcvlny.cv.net>
Source record: 38880

Hi,

I have not seen anything here yet. Of course in state mail probably will run
about three weeks for delivery ....

Take Care!

Bob Camp
KB8TQ

"Jerry Flanders" <SeeSignature@below.com> wrote in message
news:rvl91vonhmkqrgpkrmnl7pdub4uan3vvm1@4ax.com...
> On Dec 12, ARRL says they would "... send out letters with the results
> prior to Christmas to everyone who participated,". I participated and
> mailed in my results, but have received no such letter. Anybody get
> one? What are the results? Anybody know why it is still such a big
> secret (no numbers on the ARRL web site)? They comment on the accuracy
> of the entries, so they obviously have decided what the acrtual freqs
> were.
>
> http://www.arrl.org/news/stories/2002/12/12/2/
>
> Jerry W4UK
>
> --
> To reply, remove space in je flanders@comcast.net

78. Re: What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 17:03:44 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000011.006ed42a@btinternet.com>
Source record: 38881

Hi,

I know that I have heard that expression in the distant past but cannot for the life of me remember what it means. However, a web search brings up the fact that a certain Madam Sorenson was wed at the bottom of the stairs in the Peery Hotel, Salt Lake City. From which I gather she was well known at the time (1920's ??). Perhaps she was a latter-day Lizzie Borden and chopped everything up or maybe she had here own set of trimming tools and a wobbulator and went round touching thing up :-(

73 de Joe, G3LLV

79. schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 17:23:44 UTC
From: "Smile, it can only get WORSE" <artky1k@uninets.net>
Message-ID: <fohb1vg7mv223l5smgmj56gsto89ichd6v@4ax.com>
Source record: 38882
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

Hi Everyone,

I've used turbo cad some, but my version is very old (ver 3). The old version does not do electronic schematic drawing.

I've been looking for some software that would simple schematic editing and printing/saving to files.

I called the turbocad people and the lady I spoke to was very very nice. She didn't know a transistor from an IC however and really couldn't answer my questions about the abilities of turbocad to draw schematics. Perhaps I should have asked to talk to another rep who had knowledge of schematic drawing capability and features, but I didn't.

I know that there is some support for turbocad on the website, but I really need to chat with a turbocad user that does electronics and schematic drawing/editing in turbocad.

Some simple questions.....

1-Is the software specifically made to draw schematics (self layout and self completing lines if you tell it you want a connection between pin 4 of U1 and pin 9 of U2)? Or, do I have to determine where I want the particular line to run on the drawing and multiple click (basically drawing the line myself)?

2-Is it really schematic drawing friendly or is it a mechanical drawing program with a few electronic symbols on the cd rom?

3-Is there any real and practical reason for me to buy the latest version (ver 8.2)? I see some version 7's on ebay, new in the box for around 10 to 15 dollars...but they don't have hard copy book type manuals with them.

Before answering question 3, consider that I rarely dabble in circuits with more than 3 chips and 5 transistors and I want to print them and archive them to digital files and be able to make revisions and edit the diagrams. I don't need spice, pcb layout/design or any of that really pricey stuff that comes with Orcad.

Send me a sign please.

And, thanks alot!

Art

80. Re: MRF 476 transistor - Help !

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 17:29:11 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ZykR9.4321$396.166356@newsfep1-win.server.ntli.net>
Source record: 38891

> Hello. Some days ago I made a big mistake with my qrp radio :-(.
> Now I must repleace PA transistor MRF 476. I have problem to buy this one
> in Poland so I am looking for any companion outside my country with
possible
> to pay by my Visa or Mastercard and delivery this via mail to Poland. I
will
> glad for any help !
========
Found the part in the (old) catalogue of Mainline Electronics ,
Unit A ,Cuter Close ,
Narborough - Leicester LE9 5FY England UK

tel: 0044 116 286 5303
fax: 0044 116 7797 e-mail:sales@mainlinegroup.co.uk

The listing says :MRF 476 , Rating Watts CW 3 , Package TO-220 ,
Price each GBP 4.60 / matched pair GBP 12.65.

Frank , gm0csz.kn6wh@ntlworld.com

81. Re: Toshiba S-AV22A RF Power Slab

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 17:45:01 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_ykR9.4322$396.166356@newsfep1-win.server.ntli.net>
Source record: 38883

"milradio" <G4BXD@qsl.net> wrote in message
news:3e159752.494898@news.compuserve.com...
> Toshiba S-AV22A RF Power Slab
>
> does anyone have info, freq, power, availability, price ?
======
In Mainline Electronics - Leicester (old) catalogue it says :
SAV22A , 144-148 MHz , Max BW 130 - 160 , Pout ,minimal (Watts) 7 ,
Pinput mW 15 , Bias class C ,
price GBP 46.95 in quantaties > 10 GBP 42.95

sales@mainlinegroup.co.uk

Frank gm0csz.kn6wh@ntlworld.com

82. Re: What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 20:28:35 UTC
From: Chuck Chunder <See.Message.Text@ToReply.com>
Message-ID: <3e15f29d$0$18872$afc38c87@news.optusnet.com.au>
Source record: 38884

"Joe McElvenney" <ximac@btinternet.com> wrote in message

> ??). Perhaps she was a latter-day Lizzie Borden and chopped
> everything up or maybe she had here own set of trimming tools and
> a wobbulator and went round touching thing up :-(

I'd REALLY like to be touched up by a Madam with a wobbulator !!
But then I'm kinky like Litz Wire...

83. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 20:45:58 UTC
From: Peter Bennett <peterbb@interchange.ubc.ca>
Message-ID: <batb1vofe1gqplpvvmbcavn45h5fugpfbe@4ax.com>
Source record: 38885
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

On Fri, 03 Jan 2003 12:23:44 -0500, "Smile, it can only get WORSE"
<artky1k@uninets.net> wrote:

>Hi Everyone,
>
>I've used turbo cad some, but my version is very old (ver 3). The old
>version does not do electronic schematic drawing.

I've played with it a bit, but it is sufficiently different from
AutoCad and Protel that I use at work that I gave up...

>I've been looking for some software that would simple schematic
>editing and printing/saving to files.

As I recall, my version came with libraries of electrical and
electronic components. If yours didn't, you could make your own
blocks or symbols.

>1-Is the software specifically made to draw schematics (self layout
>and self completing lines if you tell it you want a connection between
>pin 4 of U1 and pin 9 of U2)? Or, do I have to determine where I want
>the particular line to run on the drawing and multiple click
>(basically drawing the line myself)?

I'm not aware of any program that will automagically make connections
on a schematic. I use Protel (a fairly expensive electronic CAD
system) and I do have to draw the schematic myself.

>2-Is it really schematic drawing friendly or is it a mechanical
>drawing program with a few electronic symbols on the cd rom?

TurboCad is primarily a mechanical drawing program - but should be OK
for simple schematics (I've used AutoCad for some fairly complex
wiring diagrams.)

--
Peter Bennett VE7CEI
GPS and NMEA info and programs: http://vancouver-webpages.com/peter/index.html
Newsgroup new user info: http://vancouver-webpages.com/nnq

84. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 20:47:26 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <cntb1vg1lfqthn2ms2ham6ss0ksgiqae6p@4ax.com>
Source record: 38886
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

On Fri, 03 Jan 2003 12:45:58 -0800,
Peter Bennett <peterbb@interchange.ubc.ca>,
In Newsgroup: sci.electronics.design,
Article: <batb1vofe1gqplpvvmbcavn45h5fugpfbe@4ax.com>,
Entitled: "Re: schematic drawing software?",
Wrote the following:

|On Fri, 03 Jan 2003 12:23:44 -0500, "Smile, it can only get WORSE"
|<artky1k@uninets.net> wrote:
|
|>Hi Everyone,
|>
|>I've used turbo cad some, but my version is very old (ver 3). The old
|>version does not do electronic schematic drawing.
|
|I've played with it a bit, but it is sufficiently different from
|AutoCad and Protel that I use at work that I gave up...
|
|>I've been looking for some software that would simple schematic
|>editing and printing/saving to files.
|
|As I recall, my version came with libraries of electrical and
|electronic components. If yours didn't, you could make your own
|blocks or symbols.
|
|>1-Is the software specifically made to draw schematics (self layout
|>and self completing lines if you tell it you want a connection between
|>pin 4 of U1 and pin 9 of U2)? Or, do I have to determine where I want
|>the particular line to run on the drawing and multiple click
|>(basically drawing the line myself)?
|
|I'm not aware of any program that will automagically make connections
|on a schematic. I use Protel (a fairly expensive electronic CAD
|system) and I do have to draw the schematic myself.
|
|>2-Is it really schematic drawing friendly or is it a mechanical
|>drawing program with a few electronic symbols on the cd rom?
|
|TurboCad is primarily a mechanical drawing program - but should be OK
|for simple schematics (I've used AutoCad for some fairly complex
|wiring diagrams.)

Keep in mind that "drawing" programs *will not* create schematics that
can be netlisted, thus their value is very limited.

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

85. Re: Orcad Capture Lite? Schematic drawing software.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 21:22:18 UTC
From: PCS Electronics <info@pcs-nooo-spam-electronics-nospam.com>
Message-ID: <8bnR9.2345$tQ1.117663@news.siol.net>
Source record: 38889
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"L Caracciolo" <larryc@northwest.com> wrote in message
news:3E15FF34.B57A3097@northwest.com...
> I have Orcad-SDT here...it'd take some effort to assemble up and zip.
>
> I can burn a CD...runs under DOS, and is VERY fast and easy to use.
>
> Only downside is that the printer drivers are very very old...

Print it into a ps file. That's what I do in Tango schematic (dos program also
and pretty good for what I need it).

--
Best regards,
Marko - PCS Electronics

86. Re: Orcad Capture Lite? Schematic drawing software.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 21:23:01 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E15FF34.B57A3097@northwest.com>
Source record: 38888
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I have Orcad-SDT here...it'd take some effort to assemble up and zip.

I can burn a CD...runs under DOS, and is VERY fast and easy to use.

Only downside is that the printer drivers are very very old...

The "free" demo CD versions of Orcad offer a little more flexibility but
you cannot save the files. I still prefer the DOS version. It can be
easily configured to run under windows.
======

"Smile, it can only get WORSE" wrote:

> Hi Everyone,
>
> I found some recent references to a version of Orcad Capture that was
> free. A google search returns hits on the orcad website, but these
> links are now defunct, so, presubably, the product is not availble any
> longer.
>
> The info I found indicated that the Orcad Capture software was
> availabe free on a CD offered by Orcad. It's supposed to be a top
> shelf pcb design and schematic editing software package for Windows.
>
> I would like to be able to draw simple schematics, edit them and print
> them so they look nice. I don't need excessive bells and whistles such
> as spice and rf design capability.
>
> I have turbocad, but it does not support schematic symbols, so a 7474
> counter chip would have to be drawn line by line and the pin out would
> have to be placed manually....not good:>:
>
> So, does anyone have a copy of the free Orcad Capture Software or know
> where to get it?
>
> Thanks,
>
> Art

87. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 21:45:44 UTC
From: "Smile, it can only get WORSE" <artky1k@uninets.net>
Message-ID: <q01c1vcbvf83h3t9q8a8uue87ss40s9pkl@4ax.com>
Source record: 38890
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

On Fri, 03 Jan 2003 20:47:26 GMT, Jim Thompson
<Jim-T@analog_innovations.com> wrote:

Jim, I sent email to you directly, it bounced. Here's the header.

Drop me a line without the usenet munged return address and I'll send
you an interesting file to look at.

Regards,

Art

>
>Keep in mind that "drawing" programs *will not* create schematics that
>can be netlisted, thus their value is very limited.
>
> ...Jim Thompson

88. Re: Orcad Capture Lite? Schematic drawing software.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 22:39:01 UTC
From: nico@puntnl.niks
Message-ID: <3e1610d4.53226796@news.planet.nl>
Source record: 38892
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

L Caracciolo <larryc@northwest.com> wrote:

>I have Orcad-SDT here...it'd take some effort to assemble up and zip.
>
>I can burn a CD...runs under DOS, and is VERY fast and easy to use.
>
>Only downside is that the printer drivers are very very old...
>
>The "free" demo CD versions of Orcad offer a little more flexibility but
>you cannot save the files. I still prefer the DOS version. It can be
>easily configured to run under windows.

Even Windows2000? My old DOS tools (Protel Autotrax and Orcad) won't
run under Windos2000.

--
Reply to nico@nctdevpuntnl (punt=.)
Bedrijven en winkels vinden? Adresboekje.nl

89. Re: Anybody receive letter from ARRL with Freq Measureing Test results?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-03 23:52:14 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <OmpR9.237358$a8.233456@news4.srv.hcvlny.cv.net>
Source record: 38893

Hi,

Well the post office fooled me this time. The letter arrived today. It's dated December 30th. The "official" frequencies turned out to be:

3579335.2 Hz
7046882.3 Hz
14049083.8 Hz
21069674.5 Hz

I blew the 80 meter measurement. Now I have to figure out why. All of them came in under a hertz but 80 meters was off by 180 ppb. The rest came in at 30 to 40 ppb.

Enjoy!

Bob Camp
KB8TQ

"Jerry Flanders" <SeeSignature@below.com> wrote in message news:rvl91vonhmkqrgpkrmnl7pdub4uan3vvm1@4ax.com...
> On Dec 12, ARRL says they would "... send out letters with the results
> prior to Christmas to everyone who participated,". I participated and
> mailed in my results, but have received no such letter. Anybody get
> one? What are the results? Anybody know why it is still such a big
> secret (no numbers on the ARRL web site)? They comment on the accuracy
> of the entries, so they obviously have decided what the acrtual freqs
> were.
>
> http://www.arrl.org/news/stories/2002/12/12/2/
>
> Jerry W4UK
>
> --
> To reply, remove space in je flanders@comcast.net

90. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 00:01:17 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e1542bb$0$5097@echo-01.iinet.net.au>
Source record: 38865

I have used the AD9854 in a DDS design as a hobbyist - I was able to get small quantities (5) through a standard distributor
At AUS$60 this is not cheap but still small beer for a commercial company. I think this is reasonable given that there is a small hobbyist market for these complex SM devices.

Richard

xpyttl <xpyttl_nospam@earthling.net> wrote in message news:v195aheevrce7e@corp.supernews.com...
> Chris
>
> Thank you very much for that clarification. As someone else who works in a
> large company, I understand how expensive it can be to process a small
> order, and knowing that amateurs were part of the intent of that sample
> process certainly helps.
>
> And in response to Mike, I get the impression that the parts are available
> in production qualities, it's just that the hobbyist distributor network is
> a little weak. The parts certainly show up in lots of things.
>
> ..
>
> "chrisdot muriel" <muriel@analogdot.com> wrote in message
> news:jkv81v8dml1e9cad7mc49bocob9bvq97cd@4ax.com...
>
>

91. Re: HAMTRONICS schematics needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 00:02:37 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E16249D.844DC2A5@crosslink.net>
Source record: 38887
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FM wrote:
>
> Hi,
>
> I am in need of Hamtronics schematics for the 28mhz. to 432mhz. and
> 222mhz. transverters.
> THANKS

<http://www.hamtronics.com/>

92. Re: Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 02:44:00 UTC
From: la8ak.xnd@online.no
Message-ID: <3e1637dc.21506377@news.online.no>
Source record: 38894

Isn't SMPS a unit which converts from 240VAC to DC and back to 240VAC
again via a battery? Had one unit some weeks ago, but it was little
interest for it around here, only one amateur wanted to have it
73 Jan-Martin, LA8AK

On Fri, 3 Jan 2003 14:33:04 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Greenweld, Mainline and Display Electronics cannot help.
>
>Maybe someone here has something or can recommend other surplus sources
>for a SMPS PCB with universal AC input and 13.8v DC out at 2A. Either a
>fixed output voltage or a 15v psu with voltage adjust pot.
>
>I require several hundred of these, at least.
>
>How much do I wish to pay?
>
>Answer, not a lot.
>
>Pound, euro's or dollars talk.
>
>I don't mind importing if the price is right.
>
>--
>Philip de Cadenet G4ZOW
>Transmitters 'R' Us
>http://www.transmittersrus.com

--
remove ,xnd to reply

93. Re: final tubes for Kenwood TS-820

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 04:58:26 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <SRtR9.551195$WL3.150254@rwcrnsc54>
Source record: 38895

joe wrote:

> it is a 6146b tube the number you listed it the kenwood part number, must
> be the original tubes?
>

I got the "S2001A" from the manual. I didn't get to see the actual tubes yet, (they are behind some shielding and I didn't bother to remove that since everything works fine right now). You are probably right, it must be some Kenwood number.

Thanks for the help everybody!

Juerg

94. Direction Coupler for JW MillerAT2500 auto tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 07:16:41 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <tTvR9.554848$%m4.162198@rwcrnsc52.ops.asp.att.net>
Source record: 38896
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I purchased this auto tuner without the Remote Direction Coupler. The coupler supplies the auto tuner with forward and reverse DC voltages. Any suggestions for an off the shelf replacement?

-rob

95. Re: Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 10:02:38 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <chVEZ0B+ErF+EwZP@fslife.co.uk>
Source record: 38797

>Isn't SMPS a unit which converts from 240VAC to DC and back to 240VAC
>again via a battery? Had one unit some weeks ago, but it was little
>interest for it around here, only one amateur wanted to have it
Hi Jan,

No, you're thinking of a UPS.

Commonly called a Useless Power Supply, which of course it is not,
especially in an emergency.

(((73)))
--
Philip de Cadenet
Transmitters 'R' Us
http://www.transmittersrus.com

96. SA639 Receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 12:34:08 UTC
From: David Huisman <dhuisman@bigpond.net.au>
Message-ID: <4xAR9.2380$oS1.10022@news-server.bigpond.net.au>
Source record: 38798

Hi,

Has anyone here some experience designing receivers using SA639 IC ?

I am looking for an example of VHF , ASK receiver.

Thanks

Regards
David Huisman

97. Re: Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 14:08:38 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <GVBR9.27209$p_6.2263097@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38799

SMPS = "Switch(ed) Mode Power Supply"

as opposed to one with a linear regulator, etc.

98. Re: Homebrew SINAD meter schematics required (00/11)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 14:51:37 UTC
From: Full Name <mike@myhome.com>
Message-ID: <c3td1vgstafeeejeeshb46qgtspkelj01m@4ax.com>
Source record: 38800

On Wed, 01 Jan 2003 09:36:07 GMT, "David Huisman"
<dhuisman@bigpond.net.au> wrote:

>Hi,
>
>Please let me know if you know of where I can obtain a schematic to
>construct a homebrew SINAD meter.
>
>Thanks
>
>Kind regards
>
>David Huisman
>

Here you go David. Hope This Helps.
Mike KC4QN

99. Re: Direction Coupler for JW MillerAT2500 auto tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 15:07:08 UTC
From: kludge@panix.com
Message-ID: <av6tas$49$1@panix2.panix.com>
Source record: 38801
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Robert Fanfant <fanfant1@attbi.com> wrote:
>I purchased this auto tuner without the Remote Direction Coupler. The
>coupler supplies the auto tuner with forward and reverse DC voltages. Any
>suggestions for an off the shelf replacement?

If you have a standard SWR bridge you should be able to pull of something
that you could scale properly for the tuner.

If you don't, I think the ARRL Handbook has directions on building SWR
bridges.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

100. manual for AEA IT-1 IsoTuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 17:29:07 UTC
From: "Mitch, W4OA" <w4oa@arrl.net>
Message-ID: <Xns92F9B1E05183Ew4oaarrlnet@216.148.227.77>
Source record: 38802
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

hi...

i just got an it-1 isotuner to go with my aea isoloop...
however, i need the manual... anyone have one that
could make me a copy? when i get it, i will scan it
in and make a pdf file for others...

tnx
mitch, w4oa
w4oa@arrl.net

101. old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 18:18:45 UTC
From: "Smile, it can only get WORSE" <artky1k@uninets.net>
Message-ID: <up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com>
Source record: 38803
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Good Day all,

What happens to old cell phones? They seem to be throw away devices, even tho they still work after the contract runs out. These days 2 years of use makes the phone ancient and worthless, regardless of whether it still works or not.

But these things are full of good rf parts sensitive 800 mhz receivers that can be put on 900 mhz ham bands and 3 watt transmitters that can run cw or fm---since the receiver and the transmitter have to run in close proximity to each other (and in full duplex), their LO's and transmitter spectral output has to be squeaky clean. Of course, there is a duplexer and the thing is loaded with top quality UHF rf components. Some of them have 'test modes' which allows the user to tune and transmit and manually control the frequencies from the keypad.

Anyway, I never see service manuals or other technical information for these things and a one year old cellphone goes for 20 bucks or less on ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..

Has anyone hacked into these and published any information on using them for alternative purposes???? Or gaining control of these things in service mode? Does anyone deal in Service Manuals for these things??

Email me or post reply here.

Have a great day.

Art

102. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 19:02:31 UTC
From: mikea@mikea.ath.cx
Message-ID: <av7b46hua2@puck.litech.org>
Source record: 38804
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

In <up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com> (rec.radio.amateur.homebrew), Smile, it can only get WORSE wrote:
> Good Day all,

> What happens to old cell phones? They seem to be throw away devices,
> even tho they still work after the contract runs out. These days 2
> years of use makes the phone ancient and worthless, regardless of
> whether it still works or not.

Our church collects them for an outfit that programs them so that
they only call 911 or *55, and then donates them to battered womens'
shelters for distribution. This is A Good Thing.

--
"Remember: every member of your 'target audience' also owns a broadcasting
station. These 'targets' can shoot back."
-- Michael Rathbun to advertisers, in nanae

103. Re: Direction Coupler for JW MillerAT2500 auto tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 19:24:02 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <lxGR9.429082$pN3.47781@sccrnsc03>
Source record: 38805
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have an off the shelf SWR bridge that I can use. Wouldn't the scaling issue issued be as simple as the output power was used during the tuning process?

"Scott Dorsey" <kludge@panix.com> wrote in message news:av6tas$49$1@panix2.panix.com...
> Robert Fanfant <fanfant1@attbi.com> wrote:
> >I purchased this auto tuner without the Remote Direction Coupler. The
> >coupler supplies the auto tuner with forward and reverse DC voltages. Any
> >suggestions for an off the shelf replacement?
>
> If you have a standard SWR bridge you should be able to pull of something
> that you could scale properly for the tuner.
>
> If you don't, I think the ARRL Handbook has directions on building SWR
> bridges.
> --scott
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."

104. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 19:55:43 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <dqee1v0jv86mirm9d39n79qc0u5351o5f3@4ax.com>
Source record: 38806
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

On Sat, 04 Jan 2003 13:18:45 -0500, "Smile, it can only get WORSE"
<artky1k@uninets.net> wrote:

>Good Day all,
>
>What happens to old cell phones?

snip
>Has anyone hacked into these and published any information on using
>them for alternative purposes???? Or gaining control of these things
>in service mode? Does anyone deal in Service Manuals for these
>things??
snip

Floating about on the Internet is a document called Motorola.txt, a
120K FAQ that has a lot of info on the older Motorola flip phones and
similar from the late 90's A google search should soon find it.

Barry Lennox

105. Re: Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 20:03:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3e16f4e9.46456314@news.online.no>
Source record: 38807

On Sat, 04 Jan 2003 14:08:38 GMT, "keep-it-clean"
<keep-it-clean@worldnet.att.net> wrote:

>SMPS = "Switch(ed) Mode Power Supply"
>
>as opposed to one with a linear regulator, etc.
>
>
- and switching regulator
--
remove ,xnd to reply

106. Re: Ext. battery pack for Yaesu vx5r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 20:55:33 UTC
From: Bill Gates cabin boy <bill@gates.com>
Message-ID: <83ie1v8efduum22fqdluah1rnvhd7443dp@4ax.com>
Source record: 38808

On Thu, 2 Jan 2003 23:59:24 +0800, "Daniel" <daniel@chan.net> wrote:

>Ext. battery pack for Yaesu vx5r
>
>I want to build a battery pack for my vx5r, but need to clarify something
>before go ahead.
>
>Q1. will ext battery damage the vx5r if I connect the battery pack for
>several hours and with 50% time of signal transmission ?

The VX5 (and anything with Li batteries) has a smart charger. You
won't overcharge the cell. Transmitting 50% of the time will heat up
the radio, though. Probably best to use the lowest power setting
that will do the job.

>Q2. what is best voltage supply(e.g. 6/12v from lead-acid type or
>7.2/9.6v from series of 1.2v cell) to vx5r ?
>
>Q3. which type is the better, lead-acid or NiCd/NiMh cell ?

Take your pick based on cost and availability. Do you already
have a charger for one or the other?

73,
Jim

>Tks
>D
>

107. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 21:06:35 UTC
From: zindazenda <zen@NOSPAMlineisp.co.uk>
Message-ID: <1041714414.47438@auth2.dns.griffin.net.uk>
Source record: 38809

yes sure...have rf side ie pa if filters so just looking 4 dds
zen
"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0301020916.789aa9f5@posting.google.com...
> "zindazenda" <zen@NOSPAMlineisp.co.uk> wrote in message
news:<1041455540.399514@auth2.dns.griffin.net.uk>...
> > more info.....
> > also has to be able to band switch and have AM and FM capability
also....LCD
> >
> > will check out "hands" tnx
>
> Sheesh. You don't want much, do you?
>
> This is a *big* project, even before the mobile require-
> ment. Are you absolutely sure you want to do this?
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

108. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 21:16:44 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <0bIR9.154122$E_.52233@news02.bloor.is.net.cable.rogers.com>
Source record: 38810
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Smile, it can only get WORSE wrote:

> Anyway, I never see service manuals or other technical information for
> these things and a one year old cellphone goes for 20 bucks or less on
> ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
>

It may be there's not much market for the manuals, as the repairs will
likely cost near or more than what the phone's worth.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

109. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 21:20:34 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3E175029.8060409@optonline.net>
Source record: 38811
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Our Police Dept. was at one time collecting them for the same purpose.
Our son's school has sometimes done the same. I think that the office of
one of our legislators is collecting them now.

-=-
Alan

Mike Andrews wrote:
> In <up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com> (rec.radio.amateur.homebrew), Smile, it
can only get WORSE wrote:
>
>>Good Day all,
>
>
>>What happens to old cell phones? They seem to be throw away devices,
>>even tho they still work after the contract runs out. These days 2
>>years of use makes the phone ancient and worthless, regardless of
>>whether it still works or not.
>
>
> Our church collects them for an outfit that programs them so that
> they only call 911 or *55, and then donates them to battered womens'
> shelters for distribution. This is A Good Thing.

110. FA:COLLINS 35C-1 LP FILTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-04 21:28:32 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <4mIR9.95071$hK4.7713803@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38812

```
+ OTHER STUFF TOO.
see under seller: heytubeguy
or
search under # 1949834063

73 heytubeguy
```

111. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 02:44:25 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <8u6f1vkr6r7mmvcj8rdvmt8ail0h9agnli@4ax.com>
Source record: 38813
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

On Sat, 04 Jan 2003 13:18:45 -0500, the renowned "Smile, it can only
get WORSE" <artky1k@uninets.net> wrote:

>Has anyone hacked into these and published any information on using
>them for alternative purposes???? Or gaining control of these things
>in service mode? Does anyone deal in Service Manuals for these
>things??

Not very exciting, but you can salvage a pager motor out of
most of them. They also have a very accurate temperature-compensated
oscillator.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

112. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 03:21:11 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <av88b7$lq9$1@freenet9.carleton.ca>
Source record: 38814
Cross-posted to: alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Spehro Pefhany (speff@interlog.com) writes:
> On Sat, 04 Jan 2003 13:18:45 -0500, the renowned "Smile, it can only
> get WORSE" <artky1k@uninets.net> wrote:
>
>>Has anyone hacked into these and published any information on using
>>them for alternative purposes???? Or gaining control of these things
>>in service mode? Does anyone deal in Service Manuals for these
>>things??
>
> Not very exciting, but you can salvage a pager motor out of
> most of them. They also have a very accurate temperature-compensated
> oscillator.
>
> Best regards,
> Spehro Pefhany

But they are also a source of other interesting radio parts. IF filters, usually at exotically high frequencies (and crystals that convert those IFs to 455KHz, complete FM IF strips for that matter, frequency prescalers, diode double balanced mixers, synthesizer ICs of various kinds, sometimes interesting RF transistors, and sundry other parts. For that matter, I have more than enough NE570 companders because I've stripped cellphones. Except that they are often oddly shaped, cellphones supply nice metal cases.

Of course, I'm referring to older and bulkier phones, when the components were nice and big, and just as important standard and not too integrated. I've bought them for fifty cents to five dollars (I think that's my limit) at garage and rummage sales, and if it's old and bulky and you want RF parts they are worth the money.

I can't say the same thing for more recent ones. Certainly hand held cellphones yield increasingly fewer parts. I got a recent one for fifty cents, and there was virtually nothing that I could recognize inside. Another one at least had a recognizable first IF filter.

Michael VE2BVW

113. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 04:28:51 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E17B483.B9D77C3@mfi.net>
Source record: 38815
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

James Knott wrote:
>
> Smile, it can only get WORSE wrote:
>
> > Anyway, I never see service manuals or other technical information for
> > these things and a one year old cellphone goes for 20 bucks or less on
> > ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
> >
>
> It may be there's not much market for the manuals, as the repairs will
> likely cost near or more than what the phone's worth.
>
> --
>
> Fundamentalism is fundamentally wrong.
>
> To reply to this message, replace everything to the left of "@" with
> james.knott.

RMS Communications in Ocala, Florida repairs and resells thousands of
used cell phones a month.
--

Michael A. Terrell
Central Florida

114. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 07:44:11 UTC
From: Jonathan Kirwan <jkirwan@easystreet.com>
Message-ID: <heof1vga6ee843doecsfb0opkcv0hbrml3@4ax.com>
Source record: 38816
Cross-posted to: alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

On 5 Jan 2003 03:21:11 GMT, et472@FreeNet.Carleton.CA (Michael
Black) wrote:

>Spehro Pefhany (speff@interlog.com) writes:
>> On Sat, 04 Jan 2003 13:18:45 -0500, the renowned "Smile, it can only
>> get WORSE" <artky1k@uninets.net> wrote:
>>
>>>Has anyone hacked into these and published any information on using
>>>them for alternative purposes???? Or gaining control of these things
>>>in service mode? Does anyone deal in Service Manuals for these
>>>things??
>>
>> Not very exciting, but you can salvage a pager motor out of
>> most of them. They also have a very accurate temperature-compensated
>> oscillator.
>
>But they are also a source of other interesting radio parts. IF filters,
>usually at exotically high frequencies (and crystals that convert
>those IFs to 455KHz, complete FM IF strips for that matter, frequency
>prescalers, diode double balanced mixers, synthesizer ICs of various kinds,
>sometimes interesting RF transistors, and sundry other parts. For that
>matter, I have more than enough NE570 companders because I've stripped
>cellphones. Except that they are often oddly shaped, cellphones supply
>nice metal cases.
>
>Of course, I'm referring to older and bulkier phones, when the components
>were nice and big, and just as important standard and not too integrated.
>I've bought them for fifty cents to five dollars (I think that's my limit)
>at garage and rummage sales, and if it's old and bulky and you want RF parts
>they are worth the money.
>
>I can't say the same thing for more recent ones. Certainly hand held
>cellphones yield increasingly fewer parts. I got a recent one for
>fifty cents, and there was virtually nothing that I could recognize
>inside. Another one at least had a recognizable first IF filter.

The newer color LCD displays might be interesting to salvage out
for some projects.

Jon

115. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 07:46:57 UTC
From: Da Man <levy_jeff@hotmail.com>
Message-ID: <RpRR9.4392$Hs3.517602@ursa-nb00s0.nbnet.nb.ca>
Source record: 38817
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

I'm also interested in this - I have a bunch of those motorola brick phones. There is a weath of good SMT parts inside! And the cases are just short of awsome. Most of the semi parts don't have numbers that can be found on the web though.

"Smile, it can only get WORSE" <artky1k@uninets.net> wrote in message news:up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com...
> Good Day all,
>
> What happens to old cell phones? They seem to be throw away devices,
> even tho they still work after the contract runs out. These days 2
> years of use makes the phone ancient and worthless, regardless of
> whether it still works or not.
>
> But these things are full of good rf parts sensitive 800 mhz receivers
> that can be put on 900 mhz ham bands and 3 watt transmitters that can
> run cw or fm---since the receiver and the transmitter have to run in
> close proximity to each other (and in full duplex), their LO's and
> transmitter spectral output has to be squeaky clean. Of course, there
> is a duplexer and the thing is loaded with top quality UHF rf
> components. Some of them have 'test modes' which allows the user to
> tune and transmit and manually control the frequencies from the
> keypad.
>
> Anyway, I never see service manuals or other technical information for
> these things and a one year old cellphone goes for 20 bucks or less on
> ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
>
> Has anyone hacked into these and published any information on using
> them for alternative purposes???? Or gaining control of these things
> in service mode? Does anyone deal in Service Manuals for these
> things??
>
> Email me or post reply here.
>
> Have a great day.
>
> Art
>

116. Re: Looking for CFJ455K5 filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 09:11:46 UTC
From: Kevin <rfman@xtra.co.nz>
Message-ID: <3E17F6D2.64AEA723@xtra.co.nz>
Source record: 38818

Try http://www.jabdog.com

http://www.jabdog.com/Filters.htm is the page for the filters.
I have just purchased one to upgrade a FRG8800. The existing filter is
~ 4.5 KHz at 6 dB.

Kevin
ZL1UJG

117. Re: Surplus SMPS sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 12:05:55 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0301050405.17abf882@posting.google.com>
Source record: 38819

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in message news:<SxyHttKg8ZF+Ew4D@fslife.co.uk>...
> Greenweld, Mainline and Display Electronics cannot help.
>
> Maybe someone here has something or can recommend other surplus sources
> for a SMPS PCB with universal AC input and 13.8v DC out at 2A. Either a
> fixed output voltage or a 15v psu with voltage adjust pot.
>
> I require several hundred of these, at least.
>
> How much do I wish to pay?
>
> Answer, not a lot.
>
> Pound, euro's or dollars talk.
>
> I don't mind importing if the price is right.

Try your local OSRAM distributor- they make a very nice unit, about the size of a cigarette packet, designed for 12v halogen lamps, good for several amps. Also meets European standards for RF crud emission. Cheap, competitive with conventional iron core transformers. (I got some as samples - very nice pieces of engineering...)

Andrew VK3BFA

118. Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 13:33:17 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3E182765.9090509@cac.net>
Source record: 38820

How does one calculate (or find already calculated) the input
impedance of a tube if it is grid driven? I'm specifically interested
in the input impedances of the Svetlana 4CX800A and the 4CX1600A.

see QRZ for my real email address, this one is quite fake.

73 de KR8LR, Chris

119. Trap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 15:13:59 UTC
From: "G. Beat" <gregory.beat.nospam@spam.attbi.com>
Message-ID: <XYXR9.451296$GR5.156133@rwcrnsc51.ops.asp.att.net>
Source record: 38821

[No readable article body recovered]

120. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 15:37:25 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <k2kg1v4s6g52o8ldn0nor5o14gikjonfms@4ax.com>
Source record: 38822
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

On Sat, 04 Jan 2003 13:18:45 -0500, "Smile, it can only get WORSE"
<artky1k@uninets.net> wrote:

>Good Day all,
>
>What happens to old cell phones? They seem to be throw away devices,
>even tho they still work after the contract runs out. These days 2
>years of use makes the phone ancient and worthless, regardless of
>whether it still works or not.
>
>But these things are full of good rf parts sensitive 800 mhz receivers
>that can be put on 900 mhz ham bands and 3 watt transmitters that can
>run cw or fm---since the receiver and the transmitter have to run in
>close proximity to each other (and in full duplex), their LO's and
>transmitter spectral output has to be squeaky clean. Of course, there
>is a duplexer and the thing is loaded with top quality UHF rf
>components. Some of them have 'test modes' which allows the user to
>tune and transmit and manually control the frequencies from the
>keypad.
>
>Anyway, I never see service manuals or other technical information for
>these things and a one year old cellphone goes for 20 bucks or less on
>ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
>
>Has anyone hacked into these and published any information on using
>them for alternative purposes???? Or gaining control of these things
>in service mode? Does anyone deal in Service Manuals for these
>things??
>
>Email me or post reply here.
>
>Have a great day.
>
>Art

If you look through the Usenet archives (http://groups.google.com),
Yo will fine a brief post or two on my efforts, to that date, of kind
of reverse engineering and re-using a bag/transmobile type phone.

The key really, is to use only the RF/IF strip, and essethinally
dump/replace the CPU/Control boards with something you can
control (I was programming the PLLs with a PC)

121. Re: Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 16:16:44 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <MTYR9.273150$a8.230642@news4.srv.hcvlny.cv.net>
Source record: 38823

Hi,

Well there are three answers to the question. Two are simple but not of much use the other is not quite so simple.

The easy one is - it's all based on capacitances and they are in the data sheet. More or less it's grid to cathode capacitance plus grid to plate capacitance times the voltage gain. That's nice but you need quite a bit more to actually design an amplifier. This is just enough information to make you dangerous.

The next level up is - if you run the drive up so that you have grid current then there is a resistive part of the impedance. More or less it comes out to grid current / drive voltage. Still only enough information to get you in a lot of trouble.

Now for the real answer - if you want the amplifier to work none of the above matters a whole lot. Sorry about that.

Here's the problem. You want the amplifier to be stable. Even with a tetrode this is not a simple problem. If you take a simple circuit, say an tapped tuned circuit and drive the grid off a high source impedance the grid will run just fine. However you will not have enough isolation between grid and plate. The reverse transfer capacitance will dump to much of the output back in to the input. The amp will oscillate and possibly detonate :)

The common solution to the problem is to slap a big old non inductive resistor on the grid. Something nice and low like 50 ohms up to maybe a couple of hundred ohms. This acts as the load impedance for the stage driving the amp and it stabilizes the amp by killing both the forward and the reverse gain. The only twist to this is if you are running at a high enough frequency for the input capacitance to matter. If so you resonate it out with a coil.

There isn't a lot of agreement on just how much you need to kill the gain. Some of it depends on just how weird a load you want the amplifier to be stable in to. For example - an open circuit load might result in a *lot* more gain than normal operation into 50 ohms.

The issue above is by no means limited to tube based amplifiers. All power amplifiers suffer from the same issues. The input circuit and in some cases feedback circuit (neutralization on a tube) are generally designed for stability rather than a match to the device. Circuit analysis software is a pretty nice thing for working this stuff out. Without it I would recommend sticking to a known good design rather than rolling your own.

Take Care!

Bob Camp
KB8TQ

"sideband" <KRNO8SPAMLR@cac.net> wrote in message
news:3E182765.9090509@cac.net...
> How does one calculate (or find already calculated) the input
> impedance of a tube if it is grid driven? I'm specifically interested
> in the input impedances of the Svetlana 4CX800A and the 4CX1600A.
>
> see QRZ for my real email address, this one is quite fake.
>
> 73 de KR8LR, Chris
>

122. Re: Trap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 17:11:26 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <av9s30$8pv$2$8300dec7@news.demon.co.uk>
Source record: 38824

"G. Beat" <gregory.beat.nospam@spam.attbi.com> wrote in message
news:XYXR9.451296$GR5.156133@rwcrnsc51.ops.asp.att.net...
>
>

looks like something TRAPped your text ??

Martin

123. Re: If you are looking for a splendid simple project for 2003!...I've got one.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 18:58:13 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0301051058.6f385d13@posting.google.com>
Source record: 38826

whagen6@cs.com (William F. Hagen) wrote in message
news:<20030102032744.18798.00000452@mb-ft.news.cs.com>...
> are you sure this is just a one transister rig? I bet there are more
> transisters inside the op amp ic.

Yes Sir, you are correct. I am sure there are many transistors...not to
mention resistors/capacitors/etc... in the LM386. I should have clarified
myself into saying that the receiver portion itself only has one
transistor.

It is truly a unique little project. Should you decide to make it one
day, I will gladly help out in any way that I can. Just e-mail me directly
at braincambre500@yahoo.com Any concerns or questions about the
unit, I will be there.

Sincerely,

Patrick

124. Re: Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 19:17:56 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3E187829.6010409@cac.net>
Source record: 38825

Bob:

Ok.. I guess now I'm more confused than I was.

Maybe I should spell out the reason for the question at hand.

I am, indeed, planning on building a homebrew amp.

I've seen a few schematics that use a resistive input to the grid on the tube, but this strikes me as a bit counterproductive, and maybe a little too simple.

So the plan is to build a torroidal broadband torroidal transformer to match the input impedance of the tube with the output impedance of the radio (and coax).

The hope here is I'll be able to remove the input SWR curve to flat, or as close to it as possible. Most of the designs I've seen have a 1.0:1 SWR at 1.8Mhz and close to 1.7:1 at 29.6 Mhz.. I'm thinking it would be nice to have something like 1.3:1 at each end and 1:1 in the middle (which I'd set to the 20M band).

Is this a silly idea? Should I just drop it and use a purely resistive input, or does this idea have any merit?

TIA

-Chris

Bob Camp wrote:
> Hi,
>
> Well there are three answers to the question. Two are simple but not of much
> use the other is not quite so simple.
>
> The easy one is - it's all based on capacitances and they are in the data
> sheet. More or less it's grid to cathode capacitance plus grid to plate
> capacitance times the voltage gain. That's nice but you need quite a bit
> more to actually design an amplifier. This is just enough information to
> make you dangerous.
>
> The next level up is - if you run the drive up so that you have grid current
> then there is a resistive part of the impedance. More or less it comes out
> to grid current / drive voltage. Still only enough information to get you in
> a lot of trouble.
>
> Now for the real answer - if you want the amplifier to work none of the

> above matters a whole lot. Sorry about that.
>
> Here's the problem. You want the amplifier to be stable. Even with a tetrode
> this is not a simple problem. If you take a simple circuit, say an tapped
> tuned circuit and drive the grid off a high source impedance the grid will
> run just fine. However you will not have enough isolation between grid and
> plate. The reverse transfer capacitance will dump to much of the output back
> in to the input. The amp will oscillate and possibly detonate :)
>
> The common solution to the problem is to slap a big old non inductive
> resistor on the grid. Something nice and low like 50 ohms up to maybe a
> couple of hundred ohms. This acts as the load impedance for the stage
> driving the amp and it stabilizes the amp by killing both the forward and
> the reverse gain. The only twist to this is if you are running at a high
> enough frequency for the input capacitance to matter. If so you resonate it
> out with a coil.
>
> There isn't a lot of agreement on just how much you need to kill the gain.
> Some of it depends on just how weird a load you want the amplifier to be
> stable in to. For example - an open circuit load might result in a *lot*
> more gain than normal operation into 50 ohms.
>
> The issue above is by no means limited to tube based amplifiers. All power
> amplifiers suffer from the same issues. The input circuit and in some cases
> feedback circuit (neutralization on a tube) are generally designed for
> stability rather than a match to the device. Circuit analysis software is a
> pretty nice thing for working this stuff out. Without it I would recommend
> sticking to a known good design rather than rolling your own.
>
>
> Take Care!
>
> Bob Camp
> KB8TQ
>
>
>
>
> "sideband" <KRNO8SPAMLR@cac.net> wrote in message
> news:3E182765.9090509@cac.net...
>
>>How does one calculate (or find already calculated) the input
>>impedance of a tube if it is grid driven? I'm specifically interested
>>in the input impedances of the Svetlana 4CX800A and the 4CX1600A.
>>
>>see QRZ for my real email address, this one is quite fake.
>>
>>73 de KR8LR, Chris
>>
>

>
>

125. Re: What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 20:54:03 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3E189BBE.B0F8F3C6@ieee.org>
Source record: 38827

This is just a guess.

Back a long time ago I worked at the end of a radio production line. To check the tracking of the LO and TRF we used a goose stick! It was a plastic rod with brass on one end and ferrite on the other. If the tracking was ok, bringing one end or the other end of the "goose" stick near RF tuned circuit would reduce the radio output. The radio, with a noise source as input, was "goosed" across the band (as you changed the radio's frequency from one end of the band to the other you alternated bringing the brass and ferrite end of the stick near the RF tuning coil.) If tracking was OK the output fell when either brass or ferrite retunned the TRF circuit. If the output increased the tracking had to be adjusted. The result being that one made the test by "goosing" the radio across the band.

If one wanted to get the most from a "Hammarlund SP-200", or other receiver in 1950 they had to have the TRF stages track each other and track the VFO.

J M Noeding wrote:

> Happy New Year, OMs!
>
> In an article found in CQ from late 50's about Hammarlund SP-200 it
> was mentioned to 'do madam Sorensen on the receiver'. But I have
> really no idea to know what it means, only that it is probably Madam
> Sï¿½rensen to use the correct spelling.
>
> 73
> Jan-Martin
> LA8AK
>
> http://www.laud.no/la6nca/LA8AK/
> --
> remove ,xnd to reply

126. Re: If you are looking for a splendid simple project for 2003!...I've got one.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 21:26:46 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3E18A31F.31921A6@ieee.org>
Source record: 38828

Reference: Schematic of the Brushless Motor with a Darlington Amplifier. Is the rectifier diode in your schematic shown correct? To turn on the darlington I would apply positive voltage. The diode as shown applies negative voltage and would turn it off!

Patrick wrote:

> Hello all,
>
> A very Happy New Year to you and yours.
>
> Well, let me begin...
>
> Every once in a blue moon I post a message explaining of my amazing one
> transistor FM receiver with just a 12 component count in the receiver
> itself!
>
> Without compromizing for...
>
> ...sensitivity
> ...selectivity
> ...and audio output
>
> ...this little jem is doing its' job just fine!
>
> I call it 'The Radio Shack Special', since all of the parts may be
> purchased their. In fact, that is why I call it by that name. No need
> to have to mail order and WAIT for your component(s) to come in.
>
> When you get to the website, just scroll down until you see the words...
>
> THE RADIO SHACK SPECIAL PROJECT
>
> Also, under that will be stories by Pedro, Philip and Murphy about their
> maiden voyage of the Radio Shack Special. Do read that also...it will
> surely give you MORE of an incentive to find out what you are getting
> into.
>
> Should this peak your interest, I am here, my friend, to help in any
> way that I can to make the journey come out well.
>
> The site is at: http://braincambre500.freeservers.com
>
> ...and let the project begin!
>

> Respectfully,
>
> Patrick Cambre
>
> P.S. I thank each and every one of you who took the time out to read my
> letter. Again, thank you.

127. Re: Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 21:39:05 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <ZB1S9.278498$a8.191390@news4.srv.hcvlny.cv.net>
Source record: 38829

Hi,

Starting with a broadband transformer is not a bad idea by it's self. The important step is the resistor across the transformer. The input to the tube looks like a capacitor. With no resistor the SWR will be pretty high (as in >> 10:1).

The thing that degrades the match at 30 MHz is the capacitance of the tube in parallel with the resistor. In order to flatten things out you will need to switch a coil in when you operate up there. If you leave the coil in at the low end the SWR down there will suffer. If you put the coil in series with the resistor the amplifier will be unstable.

If you wanted a purely resistive broadband input there are ways to design a compensating network. It is a bit complex to do without making the amplifier unstable.

Take Care!

Bob Camp
KB8TQ

"sideband" <KRNO8SPAMLR@cac.net> wrote in message
news:3E187829.6010409@cac.net...
> Bob:
>
> Ok.. I guess now I'm more confused than I was.
>
> Maybe I should spell out the reason for the question at hand.
>
> I am, indeed, planning on building a homebrew amp.
>
> I've seen a few schematics that use a resistive input to the grid on
> the tube, but this strikes me as a bit counterproductive, and maybe a
> little too simple.
>
> So the plan is to build a torroidal broadband torroidal transformer to
> match the input impedance of the tube with the output impedance of the
> radio (and coax).
>
> The hope here is I'll be able to remove the input SWR curve to flat,
> or as close to it as possible. Most of the designs I've seen have a
> 1.0:1 SWR at 1.8Mhz and close to 1.7:1 at 29.6 Mhz.. I'm thinking it
> would be nice to have something like 1.3:1 at each end and 1:1 in the
> middle (which I'd set to the 20M band).
>

> Is this a silly idea? Should I just drop it and use a purely resistive
> input, or does this idea have any merit?
>
> TIA
>
> -Chris
>
> Bob Camp wrote:

128. HP5381a freq counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 22:05:09 UTC
From: steve <swells244@insightbb.com>
Message-ID: <p_1S9.449687$pN3.49679@sccrnsc03>
Source record: 38830

I need a probe(sniffer) for this unit.Any ideas?
Steve

129. Re: HP5381a freq counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-05 22:24:07 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <bg2S9.54053$L61.3763199@news1.west.cox.net>
Source record: 38831

Depends on the levels you are trying to measure. For Ham Radio transmitters -- I purchased a telescoping antenna from radio shack and put a BNC on it. -- it picks up fine for my Ham transmitters.

As I recall the HP 5381A was good up to 80 MHz speced but will measure higher.

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"steve" <swells244@insightbb.com> wrote in message
news:p_1S9.449687$pN3.49679@sccrnsc03...
> I need a probe(sniffer) for this unit.Any ideas?
> Steve

130. Re: Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 00:40:57 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3E18C3DE.7080006@cac.net>
Source record: 38832

Bob:

Well, I had planned on putting a resistor between the transformer and
the grid, something on the order of 20 ohms or so.

Maybe I'll just stick with a purely resistive design, but the
temptation to experimentation is just sometimes too strong.

73 de KR8LR, Chris

Bob Camp wrote:
> Hi,
>
> Starting with a broadband transformer is not a bad idea by it's self. The
> important step is the resistor across the transformer. The input to the tube
> looks like a capacitor. With no resistor the SWR will be pretty high (as in
>
>>>10:1).
>>
>
> The thing that degrades the match at 30 MHz is the capacitance of the tube
> in parallel with the resistor. In order to flatten things out you will need
> to switch a coil in when you operate up there. If you leave the coil in at
> the low end the SWR down there will suffer. If you put the coil in series
> with the resistor the amplifier will be unstable.
>
> If you wanted a purely resistive broadband input there are ways to design a
> compensating network. It is a bit complex to do without making the amplifier
> unstable.
>
> Take Care!
>
> Bob Camp
> KB8TQ
>
>
>
> "sideband" <KRNO8SPAMLR@cac.net> wrote in message
> news:3E187829.6010409@cac.net...
>
>>Bob:
>>
>>Ok.. I guess now I'm more confused than I was.
>>
>>Maybe I should spell out the reason for the question at hand.

>>
>>I am, indeed, planning on building a homebrew amp.
>>
>>I've seen a few schematics that use a resistive input to the grid on
>>the tube, but this strikes me as a bit counterproductive, and maybe a
>>little too simple.
>>
>>So the plan is to build a torroidal broadband torroidal transformer to
>>match the input impedance of the tube with the output impedance of the
>>radio (and coax).
>>
>>The hope here is I'll be able to remove the input SWR curve to flat,
>>or as close to it as possible. Most of the designs I've seen have a
>>1.0:1 SWR at 1.8Mhz and close to 1.7:1 at 29.6 Mhz.. I'm thinking it
>>would be nice to have something like 1.3:1 at each end and 1:1 in the
>>middle (which I'd set to the 20M band).
>>
>>Is this a silly idea? Should I just drop it and use a purely resistive
>>input, or does this idea have any merit?
>>
>>TIA
>>
>>-Chris
>>
>>Bob Camp wrote:
>
>
>

131. Monoband 10 meter rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 01:45:09 UTC
From: Michael Prevatt <ku4yp@earthlink.net>
Message-ID: <Fc5S9.17670$9N5.1624333@newsread2.prod.itd.earthlink.net>
Source record: 38835

hello all,

is anyone aware or does anyone have, plans for a monoband ssb/cw rig for 10 meters? already looked at ac6v.com. no joy. wanting to build one for a neat antenna i have just for 10.

what i would really like is to use this hw-101 vfo i have and alot of the other parts from the heath junker to build just the 10 meter section of the hw-101. obviously meusing tubes would not be a problem.

has anyone tried this?

73 and tnx ku4yp

mike prevatt

132. FA Old Book - ARRL VHF Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 01:45:20 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avan8u$b2m$2$830fa79f@news.demon.co.uk>
Source record: 38833
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Please look at this
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&category=1502&item=194923464
6&rd=1

133. icom ic-rp1510 programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 02:12:55 UTC
From: Steve <scannr1@citlink.net>
Message-ID: <v1hpehecj6g354@corp.supernews.com>
Source record: 38834

hi all

I just aquired an Icom ic-rp1510
does someone out there have the frequency programming
info for the icom ic-rp1510 repeater.

Thanks
Steve KC7YNS

134. Re: Silly Question re: tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 02:47:20 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <Y66S9.283467$a8.171678@news4.srv.hcvlny.cv.net>
Source record: 38836

Hi,

Well the resistor needs to go from the grid to ground. A resistor in series with the grid may not do the trick. A lot would depend on the design of the stage driving the amplifier.

Take Care!

Bob Camp
KB8TQ

"sideband" <KRNO8SPAMLR@cac.net> wrote in message news:3E18C3DE.7080006@cac.net...
> Bob:
>
> Well, I had planned on putting a resistor between the transformer and
> the grid, something on the order of 20 ohms or so.
>
> Maybe I'll just stick with a purely resistive design, but the
> temptation to experimentation is just sometimes too strong.
>
> 73 de KR8LR, Chris
>
> Bob Camp wrote:
> > Hi,
> >
> > Starting with a broadband transformer is not a bad idea by it's self. The
> > important step is the resistor across the transformer. The input to the tube
> > looks like a capacitor. With no resistor the SWR will be pretty high (as in
> >
> >>>>10:1).
> >>
> >
> > The thing that degrades the match at 30 MHz is the capacitance of the tube
> > in parallel with the resistor. In order to flatten things out you will need
> > to switch a coil in when you operate up there. If you leave the coil in at
> > the low end the SWR down there will suffer. If you put the coil in series
> > with the resistor the amplifier will be unstable.

> >
> > If you wanted a purely resistive broadband input there are ways to
design a
> > compensating network. It is a bit complex to do without making the
amplifier
> > unstable.
> >
> > Take Care!
> >
> > Bob Camp
> > KB8TQ
> >
> >
> >
> > "sideband" <KRNO8SPAMLR@cac.net> wrote in message
> > news:3E187829.6010409@cac.net...
> >
> >>Bob:
> >>
> >>Ok.. I guess now I'm more confused than I was.
> >>
> >>Maybe I should spell out the reason for the question at hand.
> >>
> >>I am, indeed, planning on building a homebrew amp.
> >>
> >>I've seen a few schematics that use a resistive input to the grid on
> >>the tube, but this strikes me as a bit counterproductive, and maybe a
> >>little too simple.
> >>
> >>So the plan is to build a torroidal broadband torroidal transformer to
> >>match the input impedance of the tube with the output impedance of the
> >>radio (and coax).
> >>
> >>The hope here is I'll be able to remove the input SWR curve to flat,
> >>or as close to it as possible. Most of the designs I've seen have a
> >>1.0:1 SWR at 1.8Mhz and close to 1.7:1 at 29.6 Mhz.. I'm thinking it
> >>would be nice to have something like 1.3:1 at each end and 1:1 in the
> >>middle (which I'd set to the 20M band).
> >>
> >>Is this a silly idea? Should I just drop it and use a purely resistive
> >>input, or does this idea have any merit?
> >>
> >>TIA
> >>
> >>-Chris
> >>
> >>Bob Camp wrote:
> >
> >
> >

>

135. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 08:05:50 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <yNaS9.30020$p_6.2520395@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38837

If you really want to go the DDS route, I can send you design information, including code and board layouts. I probably wouldn't use a straight DDS; a better way would be to use it as a variable reference in a PLL, using the PLL as a tracking filter to clean up the artifacts.

Pete

zindazenda <zen@NOSPAMlineisp.co.uk> wrote in message news:1041714414.47438@auth2.dns.griffin.net.uk...
> yes sure...have rf side ie pa if filters so just looking 4 dds
> zen
> "Laura Halliday" <marsgal42@hotmail.com> wrote in message
> news:d42b5a72.0301020916.789aa9f5@posting.google.com...
> > "zindazenda" <zen@NOSPAMlineisp.co.uk> wrote in message
> news:<1041455540.399514@auth2.dns.griffin.net.uk>...
> > > more info.....
> > > also has to be able to band switch and have AM and FM capability
> also....LCD
> > >
> > > will check out "hands" tnx
> >
> > Sheesh. You don't want much, do you?
> >
> > This is a *big* project, even before the mobile require-
> > ment. Are you absolutely sure you want to do this?
> >
> > Laura Halliday VE7LDH "Que les nuages soient notre
> > Grid: CN89lg pied a terre..."
> > ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte
>
>

136. Re: Homebrew SINAD meter schematics required (00/11)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 12:47:48 UTC
From: David Huisman <dhuisman@bigpond.net.au>
Message-ID: <UVeS9.7981$oS1.35808@news-server.bigpond.net.au>
Source record: 38838

Mike,

Thanks for your kind effort to pass on the Sinnader details to me.
Unfortunately there were a couple of problems.

1) Would you mind emailing the files directly to me info@orbitcoms.com as
they take up heaps of space on the newsgroup.

2) Only every 2nd file seems to open correctly.

Kind regards

David Huisman

137. Re: HP5381a freq counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 13:21:32 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <J8qcnViFv9SSHoSjXTWcow@comcast.com>
Source record: 38839

In one of the application notes at www.linear.com they describe a "noise sniffer" which is just a loop of wire at the end of coax.

"AC6V" <ac6v@amsat.org> wrote in message
news:bg2S9.54053$L61.3763199@news1.west.cox.net...
> Depends on the levels you are trying to measure. For Ham Radio
> transmitters -- I purchased a telescoping antenna from radio shack and
put
> a BNC on it. -- it picks up fine for my Ham transmitters.
>
> As I recall the HP 5381A was good up to 80 MHz speced but will measure
> higher.
>
> --
> I Doubt, Therefore I Might Be
> 73 From AC6V, Rod In Oceanside, CA
> http://ac6v.com
> "steve" <swells244@insightbb.com> wrote in message
> news:p_1S9.449687$pN3.49679@sccrnsc03...
> > I need a probe(sniffer) for this unit.Any ideas?
> > Steve
>
>

138. Wanted: QRP LP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 17:38:06 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301060938.ae1042e@posting.google.com>
Source record: 38840

Wondering if someone has a LP filter (commercial or homebrew)
collecting dust in a corner of the shack that they'd be willing to
sell? Won't have more than 20W applied to it. Please reply to e-mail
in this message. tnx es 73, Casey, KS7J

139. Re: Wanted: QRP LP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 17:58:59 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <IbzS9.327$9l3.115749@newsfep2-win.server.ntli.net>
Source record: 38754

> Wondering if someone has a LP filter (commercial or homebrew)
> collecting dust in a corner of the shack that they'd be willing to
> sell? Won't have more than 20W applied to it. Please reply to e-mail
> in this message. tnx es 73, Casey, KS7J
==========
Could you be somewhat more specific . If Low Pass ,what would be the
required cut-off freq .
Is is for a mono or multi-band transmitter ?

For QRP level of power (up to 5 Watts RF) simple homebrew filters can be
made with small iron dust toroids in the Txx-6 range.

Frank gm0csz.kn6wh@ntlworld.com

140. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 18:49:41 UTC
From: Wim Ton <wimton@blueyonder.co.uk>
Message-ID: <JakS9.17867$j9.17002@news-binary.blueyonder.co.uk>
Source record: 38841
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Hi,

I have the innards of a very old Nokia here, and it uses very identifyable parts, Siemens HF IC's, Intel flash etc. Unfortunately with a 0.5 mm pitch

Wim

141. 9 band receiver for the home constructor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 20:24:54 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <avcomavt1@news6.svr.pol.co.uk>
Source record: 38842
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

The Doric multiband receiver by Sir Douglas Hall.
for the home constructor.
6 Short wave+MW/LW/VHF.
Comprehensive 21 page construction article.

Full article on the website (Aug 1979)

http://www.spontaflex.freeserve.co.uk/

Geoff

142. Re: Direction Coupler for JW MillerAT2500 auto tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 21:03:50 UTC
From: kludge@panix.com
Message-ID: <avcqvm$8va$1@panix2.panix.com>
Source record: 38843
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Robert Fanfant <fanfant1@attbi.com> wrote:
>I have an off the shelf SWR bridge that I can use. Wouldn't the scaling
>issue issued be as simple as the output power was used during the tuning
>process?

I think so. I think the tuner electronics are basically looking for a
ratio so they can zero out the reflected current. So if you get the
thing in the general ballpark you should be okay.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

143. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 21:17:24 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.188410cbd50beaf9989681@News.CIS.DFN.DE>
Source record: 38844
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

Art,

after having tried many cad for schematicks and PCB design I recommend
you give Eagle a try (www.cadsoft.de). The user-interface needs some
time to get used to (as most CAD software).
There is a free version with limits the size of the schematics (1 page)
and the size of the PCB board.

Markus

In article <fohb1vg7mv223l5smgmj56gsto89ichd6v@4ax.com>,
artky1k@uninets.net says...
> Hi Everyone,
>
> I've used turbo cad some, but my version is very old (ver 3). The old
> version does not do electronic schematic drawing.
>
> I've been looking for some software that would simple schematic
> editing and printing/saving to files.
>
> I called the turbocad people and the lady I spoke to was very very
> nice. She didn't know a transistor from an IC however and really
> couldn't answer my questions about the abilities of turbocad to draw
> schematics. Perhaps I should have asked to talk to another rep who had
> knowledge of schematic drawing capability and features, but I didn't.
>
> I know that there is some support for turbocad on the website, but I
> really need to chat with a turbocad user that does electronics and
> schematic drawing/editing in turbocad.
>
> Some simple questions.....
>
> 1-Is the software specifically made to draw schematics (self layout
> and self completing lines if you tell it you want a connection between
> pin 4 of U1 and pin 9 of U2)? Or, do I have to determine where I want
> the particular line to run on the drawing and multiple click
> (basically drawing the line myself)?
>
> 2-Is it really schematic drawing friendly or is it a mechanical
> drawing program with a few electronic symbols on the cd rom?
>
> 3-Is there any real and practical reason for me to buy the latest
> version (ver 8.2)? I see some version 7's on ebay, new in the box for
> around 10 to 15 dollars...but they don't have hard copy book type

> manuals with them.
>
> Before answering question 3, consider that I rarely dabble in circuits
> with more than 3 chips and 5 transistors and I want to print them and
> archive them to digital files and be able to make revisions and edit
> the diagrams. I don't need spice, pcb layout/design or any of that
> really pricey stuff that comes with Orcad.
>
> Send me a sign please.
>
> And, thanks alot!
>
> Art
>
>
>
>
>

144. WTB Vac Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 21:35:37 UTC
From: K4JA <k4ja@crosslink.net>
Message-ID: <3e19f6ab$0$31481@dingus.crosslink.net>
Source record: 38845

I would like to purchase about 25 HC-1 or RJ-1A Vacuum Relays. Preferable in bulk.

145. Re: HP5381a freq counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-06 23:52:54 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <n62i1v8n7ludkfbj86f09jlqe1ug693mpv@4ax.com>
Source record: 38846

On Sun, 05 Jan 2003 22:05:09 GMT steve <swells244@insightbb.com>
wrote:

>I need a probe(sniffer) for this unit.Any ideas?

You can use any wire with a BNC connector, or any oscilloscope probe.
Flat frequency response is unimportant, since you will only be looking
at one at a time.

Just be careful not to put too much voltage into the input.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

146. Looking for a good schematic/design for an alternator/ignition noise filter!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 00:07:18 UTC
From: Tony <n5gpi@hotmail.com>
Message-ID: <WSoS9.121151$6H6.3977716@twister.austin.rr.com>
Source record: 38747

Any one have something tried and tested to eliminate alternator and ignition noise from my 12 vdc source?

Thanks,

N5GPI

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/02

147. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 00:20:52 UTC
From: Da Man <levy_jeff@hotmail.com>
Message-ID: <E3pS9.5299$Hs3.630010@ursa-nb00s0.nbnet.nb.ca>
Source record: 38748
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

"john walton" <jdwalton@comcast.net> wrote in message
news:JtKdnQdbqIUyHoSjXTWcpw@comcast.com...
> I am using the cell phone battery for one of my first Motorola units to
> power a Tektronix photometer.

I made a little sterio FM transmitter, and a old NiMH cell battery powers
it. I even use some of the old phone as a charger!

>
> "Smile, it can only get WORSE" <artky1k@uninets.net> wrote in message
> news:up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com...
> > Good Day all,
> >
> > What happens to old cell phones? They seem to be throw away devices,
> > even tho they still work after the contract runs out. These days 2
> > years of use makes the phone ancient and worthless, regardless of
> > whether it still works or not.
> >
> > But these things are full of good rf parts sensitive 800 mhz receivers
> > that can be put on 900 mhz ham bands and 3 watt transmitters that can
> > run cw or fm---since the receiver and the transmitter have to run in
> > close proximity to each other (and in full duplex), their LO's and
> > transmitter spectral output has to be squeaky clean. Of course, there
> > is a duplexer and the thing is loaded with top quality UHF rf
> > components. Some of them have 'test modes' which allows the user to
> > tune and transmit and manually control the frequencies from the
> > keypad.
> >
> > Anyway, I never see service manuals or other technical information for
> > these things and a one year old cellphone goes for 20 bucks or less on
> > ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
> >
> > Has anyone hacked into these and published any information on using
> > them for alternative purposes???? Or gaining control of these things
> > in service mode? Does anyone deal in Service Manuals for these
> > things??
> >
> > Email me or post reply here.
> >
> > Have a great day.
> >
> > Art
> >
>

>

148. Re: Homebrew SINAD meter schematics required (00/11)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 01:55:41 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E1A339D.2BC5527@nettally.com>
Source record: 38749

I wonder if someone has developed a DSP/soundcard SINAD meter solution?

David Huisman wrote:

> Mike,
>
> Thanks for your kind effort to pass on the Sinnader details to me.
> Unfortunately there were a couple of problems.
>
> 1) Would you mind emailing the files directly to me info@orbitcoms.com as
> they take up heaps of space on the newsgroup.
>
> 2) Only every 2nd file seems to open correctly.
>
> Kind regards
>
> David Huisman

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

149. FS: RF Connectors & Adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 03:37:46 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <eYrS9.67069$L61.4401524@news1.west.cox.net>
Source record: 38750
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Please email w6krc@arrl.net for a list.

150. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 04:06:26 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1kkd2j5of3oc5@corp.supernews.com>
Source record: 38751
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Da Man wrote:
> "john walton" <jdwalton@comcast.net> wrote in message
> news:JtKdnQdbqIUyHoSjXTWcpw@comcast.com...
>
>>I am using the cell phone battery for one of my first Motorola units to
>>power a Tektronix photometer.
>
>
> I made a little sterio FM transmitter, and a old NiMH cell battery powers
> it. I even use some of the old phone as a charger!

Mine old 90's analog ditty is thrown into a box with all the original
paperwork along with the Elvis candles. It will be worth something
someday :-)

-Bill M

151. Re: Homebrew SINAD meter schematics required (00/11)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 08:11:27 UTC
From: d8lars@dtek.chalmers.se
Message-ID: <ave23f$73b$1@nyheter.chalmers.se>
Source record: 38752

In article <c3td1vgstafeeejeeshb46qgtspkelj01m@4ax.com>,
Full Name <myaddress@myhome.com> wrote:
>On Wed, 01 Jan 2003 09:36:07 GMT, "David Huisman"
><dhuisman@bigpond.net.au> wrote:
>
>>Hi,
>>
>>Please let me know if you know of where I can obtain a schematic to
>>construct a homebrew SINAD meter.
>>
>>Thanks
>>
>>Kind regards
>>
>>David Huisman
>>
>Here you go David. Hope This Helps.
>Mike KC4QN

Hi Mike!

I am interested in this design also, but none of your files has reached my
news server. Is it possible for you to send them in a mail/several mails
to me? You can use the address I am using writing this.

73 de Lars, sm6rpz
--
Lars E Pettersson | Chalmers University of Technology
d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

152. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 08:49:51 UTC
From: invalidaddress12345@hotmail.com
Message-ID: <9a86df0d.0301070049.1959e4@posting.google.com>
Source record: 38753
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

Here it is my 5 cents design, monitor and control devices with your old cellphone:

http://www.riccibitti.com/tinyplanet/tiny_intro.htm

Alberto Ricci Bitti

"Smile, it can only get WORSE" <artky1k@uninets.net> wrote in message
news:<up8e1vo44pd8e5dj596ov6npd6ppius8oo@4ax.com>...
> Good Day all,
>
> What happens to old cell phones? They seem to be throw away devices,
> even tho they still work after the contract runs out. These days 2
> years of use makes the phone ancient and worthless, regardless of
> whether it still works or not.
>
> But these things are full of good rf parts sensitive 800 mhz receivers
> that can be put on 900 mhz ham bands and 3 watt transmitters that can
> run cw or fm---since the receiver and the transmitter have to run in
> close proximity to each other (and in full duplex), their LO's and
> transmitter spectral output has to be squeaky clean. Of course, there
> is a duplexer and the thing is loaded with top quality UHF rf
> components. Some of them have 'test modes' which allows the user to
> tune and transmit and manually control the frequencies from the
> keypad.
>
> Anyway, I never see service manuals or other technical information for
> these things and a one year old cellphone goes for 20 bucks or less on
> ebay these days! 2 year old cell phones go for 3 for 20 bucks or so..
>
> Has anyone hacked into these and published any information on using
> them for alternative purposes???? Or gaining control of these things
> in service mode? Does anyone deal in Service Manuals for these
> things??
>
> Email me or post reply here.
>
> Have a great day.
>
> Art

153. NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 20:50:22 UTC
From: Ross <rjtucke@asu.edu>
Message-ID: <rjtucke-43C82B.13530607012003@news.west.cox.net>
Source record: 38755
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

Hi there.
I'm doing this project for school that involves a complete mathematical analysis of this receiver that I built. The detector (it's a regenerative design) uses a grid-leak method on a 6GH8A pentode.
Let me hasten to say that I'm not asking you for all that! I've got it almost done (I hope) except I need a model for the control grid current. It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I find the tailoring of all those fitting parameters more confusing than applying Kirchoff ad finitum to the circuit.
Thank you very much for your time.

Sincerely,
Ross
Physics Undergraduate
Arizona State Pentitenary (oops, I meant to say University)

154. Bird 43 Elements Outside Their Range

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 21:57:40 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <3E1B4D53.AC3B63C8@agilent.com>
Source record: 38756

Has anybody ever swept a Bird 43 element outside its rated frequency range to see how quickly it drops off on either side?

I seem to remember casually measuring I think a 25 - 60 MHz element once and seeing that it was no more than 1 or 2 dB down at 3.5 MHz.

I've already checked the source: Bird Electronics does not publish frequency response curves of their elements on their web site.

Thanks,

Al W6LX

155. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 22:38:24 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1B5690.9030606@attbi.com>
Source record: 38757
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

It's been a long long time <1957> since my vacuum tube days but let me meander a bit. Grid Leak established the dc operating point for a Class A amplifier. The grid leak resistor has a distributed capacitor, leakage and circuit stray capacitance, to chassis and to the plate circuit. In the tube there are a series of interelectrode capacitors. The Suppressor grid is generally grounded to chassis to minimize electron backscatter and to break up the Cp to Cg. The screen grid is heavily bypassed. Regeneration is achieved by introducing feedback, variable capacitor or adjusting tube gain, from the plate to the grid with a phase angle between 145 and 225 degrees and a feedback factor very close to but less than unity at the operating frequency.

So, I would begin my model by using a dependent voltage source, % of tube output, with a variable gain, setting loop gain, [forward gain of the amplifier times the feedback factor] [ratio of capacitors, plate to grid leakage], to slightly less than 1, and have a phase shift of 180 degrees nominally with a variance of +/- 45 degrees.

Test the model until the circuit just breaks in oscillation then back off on the feedback a percent or two.

Let me know how it works out.

Deacon Dave, W1MCE

Ross wrote:
> Hi there.
> I'm doing this project for school that involves a complete mathematical
> analysis of this receiver that I built. The detector (it's a
> regenerative design) uses a grid-leak method on a 6GH8A pentode.
> Let me hasten to say that I'm not asking you for all that! I've got it
> almost done (I hope) except I need a model for the control grid current.
> It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I
> find the tailoring of all those fitting parameters more confusing than
> applying Kirchoff ad finitum to the circuit.
> Thank you very much for your time.
>
> Sincerely,
> Ross
> Physics Undergraduate
> Arizona State Pentitenary (oops, I meant to say University)

156. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 23:18:01 UTC
From: kensmith@mauve.rahul.net
Message-ID: <avfn79$g5v$7@blue.rahul.net>
Source record: 38758
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

In article <rjtucke-43C82B.13530607012003@news.west.cox.net>,
Ross <rjtucke@asu.edu> wrote:
>Hi there.
>I'm doing this project for school that involves a complete mathematical
>analysis of this receiver that I built. The detector (it's a
>regenerative design) uses a grid-leak method on a 6GH8A pentode.
>Let me hasten to say that I'm not asking you for all that! I've got it
>almost done (I hope) except I need a model for the control grid current.
>It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I
>find the tailoring of all those fitting parameters more confusing than
>applying Kirchoff ad finitum to the circuit.
>Thank you very much for your time.

I think you may need to include the "uramp" in a general voltage
controlled current source. The electron only come out the control grid
and never go in. I think the grid current actually follows something like
an exp() curve near the zero bias point.

--
--
kensmith@rahul.net forging knowledge

157. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-07 23:28:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avfnq8$o22$1@venus.btinternet.com>
Source record: 38759
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

Treat the pentode control grid as the plate of a diode detector without any loss of precision.

Essentially, the average DC grid current is equal to the peak value of the RF signal voltage divided by the high-value grid leak resistor. The grid current, of course, flows only on the peaks of the grid sinewave form. Grid current has an operating angle given by -

Theta = 2*InverseCosine(Ea / E)

where E is the peak value of the RF input signal and Ea is the DC voltage across the grid resistor. The difference between Ea and E is very small. But for your purposes Theta can be ignored.

The internal diode resistance, when conducting, can be assumed to be a linear resistance of a few hundred ohms. For normal detector operation it is necessary only that the grid leak resistor be very much greater than the internal diode resistance.

The grid (the diode plate) voltage is then amplified by the pentode in the normal manner, with the mean DC component varying according to the audio modulation. The pentode anode must be decoupled for RF otherwise the RF component is fed into the following audio stages. (A junction transistor works in exactly the same way except that the base must be forward biased by a few tenths of a volt.)

****

A complete analysis (but it's not very complicated) can be found in "Communication Engineering", W.L.Everitt, E.E. Ph.D, 1937, McGraw-Hill Book Company Inc.

This is an old book but should be available in many university technical libraries. It is still the best book on mathematical treatment of vacuum tube circuits in radio receivers and transmitters. Go to the chapter on Vacuum Tube Detectors. I thoroughly recommend it.

None of the following programs deal with detectors but you may find some of then useful with your studies.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

158. HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 00:00:53 UTC
From: dangett@yahoo.com
Message-ID: <49206ac2.0301071600.728a7a3e@posting.google.com>
Source record: 38760

Hello fellow hams,

I am appealing to you who are broadcast engineers. Does anyone have an FM broadcast transmitter they do not need or want?

A friend of mine is in desperate need of a 5 KW or greater unit. He has no money...so I am asking for a donation. I will pick up and transport it.

Thanks and please email with any info.

Dan

159. Re: Bird 43 Elements Outside Their Range

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 00:26:44 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E1B7043.3D8E2C0D@northwest.com>
Source record: 38761

The low power units are quite narrow band...the higher power units (say,
100W) might be useable ...but why risk it...unless you'e looking for only a
relative measurement.

========
Al Lorona wrote:

> Has anybody ever swept a Bird 43 element outside its rated frequency
> range to see how quickly it drops off on either side?
>
> I seem to remember casually measuring I think a 25 - 60 MHz element once
> and seeing that it was no more than 1 or 2 dB down at 3.5 MHz.
>
> I've already checked the source: Bird Electronics does not publish
> frequency response curves of their elements on their web site.
>
> Thanks,
>
> Al W6LX

160. Re: HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 00:27:30 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E1B7071.AE5F0666@northwest.com>
Source record: 38762

is this donation subject to the vigilence of the "Patriot" act?

=======

Dan Gett wrote:

> Hello fellow hams,
>
> I am appealing to you who are broadcast engineers. Does anyone have an
> FM broadcast transmitter they do not need or want?
>
> A friend of mine is in desperate need of a 5 KW or greater unit. He
> has no money...so I am asking for a donation. I will pick up and
> transport it.
>
> Thanks and please email with any info.
>
> Dan

161. Re: Looking for a good schematic/design for an alternator/ignition noise filter!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 01:30:02 UTC
From: Tony <n5gpi@hotmail.com>
Message-ID: <uaLS9.1767$aG4.104804@twister.austin.rr.com>
Source record: 38764

Nevermind ... Built one last night with my own design, works excellent, eliminates alt noise, ignition noise and all other elec. noise generated by the vehicle.

Tony

"Tony" <n5gpi@hotmail.com> wrote in message news:WSoS9.121151$6H6.3977716@twister.austin.rr.com...
> Any one have something tried and tested to eliminate alternator and ignition
> noise from my 12 vdc source?
>
> Thanks,
>
> N5GPI
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/02
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/02

162. FS:National Radio chokes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 01:57:41 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <pALS9.100430$hK4.8151272@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38765
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

A lot of 14 NEW National Radio Chokes of various ratings: see under seller
< heytubeguy>

163. FA:Greenlee Chassis punches-ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 02:02:32 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <YELS9.100437$hK4.8151674@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38766
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

a Lot of two Greenlee radio chassis punches: 1 3/8" and 1 1/8".
see seller under <heytubeguy> on ebay

164. FA:Ungar iron body+three tips-ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 02:06:02 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <eILS9.100439$hK4.8152834@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38767
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

An ungar soldering iron body + three tips :see under seller <heytubeguy>

165. FA For Auction 1964 and 1961 Popular Electronics Magazines 12 issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 06:37:43 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <avggvomul1@slb5.atl.mindspring.net>
Source record: 38768
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.amateur.boatanchors

If interested:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904771978&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904770401&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904766658&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904754959&ssPageName=ADM
E:B:LC:US:1

Jim

166. FA For Auction Popular Electroncis Magazines 1958, 10 issues and 1957, 11 issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 06:39:58 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <avgh3v$fi8$1@slb5.atl.mindspring.net>
Source record: 38769
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.amateur.boatanchors

If interested:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904771978&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904770401&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904766658&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904754959&ssPageName=ADM
E:B:LC:US:1

Jim

167. Icom 70cm IC-U16 programing

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 07:42:46 UTC
From: Louis van Heerden <zs1lvh@absamail.co.za>
Message-ID: <3e1bd7cb$0$230@hades.is.co.za>
Source record: 38770

I have a pair of Icon IC-U16 70cm handhelds.Both are programmed with the same frequecies (I know about Func/159357 etc) On one the numbers of the programmed frequencies appear when I press scan and it does a normal scan the other is the problem as it will not scan, if I hold down the up or down arrows it will scan as long as I hold the key down but will not scan by its self. It is not in priority scan mode. Please can anyone tell me how to get the scan to opperate.
73 Louis ZS1LVH
zs1lvh@absamail.co.za

168. Re: Bird 43 Elements Outside Their Range

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 08:42:52 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <avgocl$l60@newton.cc.rl.ac.uk>
Source record: 38771

"L Caracciolo" <larryc@northwest.com> wrote in message
news:3E1B7043.3D8E2C0D@northwest.com...
> The low power units are quite narrow band...the higher power units (say,
> 100W) might be useable ...but why risk it...unless you'e looking for only
a
> relative measurement.
>

Because they are so very expensive. ?100 ~($160).

The high power elements are quite broadband in power measurement. I don't know about directivity. The low power ones are not. As a result, a 500W or a 1kW 50-125 MHz element can be used on 144 MHz with only a small error. At HF, a 43 is probably not the best choice as the sample line technique is less sensitive than the easy to make broadband transformer detector. Cheaper amateur power meters are adequate at HF.

169. Re: HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 11:42:27 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <DfUS9.230$UM4.51809@newsfep1-win.server.ntli.net>
Source record: 38772

> A friend of mine is in desperate need of a 5 KW or greater unit. He
> has no money...so I am asking for a donation. I will pick up and
> transport it.
======
Intriguing message . I wonder what such a unit will be used for ,I mean a
transmitter with such a high power rating.
For a local community radio station I imagine 100 W would be more than
adequate.
Just curious.

Frank gm0csz.kn6wh@ntlworld.com

SPAM is readily rejected by Mailwasher www.mailwasher.com

170. Re: Looking for a good schematic/design for an alternator/ignition noise filter!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 11:46:34 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <EfUS9.231$UM4.51809@newsfep1-win.server.ntli.net>
Source record: 38773

> Nevermind ... Built one last night with my own design, works excellent,
> eliminates alt noise, ignition noise and all other elec. noise generated
by
> the vehicle.
=======
Tony , Perhaps you are prepared to share your design with readers of this NG

Do you have a web site ?

Frank gm0csz.kn6wh@ntlworld.com

171. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 11:57:16 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <DTFIi2AcIBH+Ewpj@jmwa.demon.co.uk>
Source record: 38774
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Ross <rjtucke@asu.edu> wrote (in
<rjtucke-43C82B.13530607012003@news.west.cox.net>) about 'NEED ADVICE:
Vacuum tube grid current?', on Tue, 7 Jan 2003:
>I'm doing this project for school that involves a complete mathematical
>analysis of this receiver that I built. The detector (it's a
>regenerative design) uses a grid-leak method on a 6GH8A pentode.
>Let me hasten to say that I'm not asking you for all that! I've got it
>almost done (I hope) except I need a model for the control grid current.
>It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I
>find the tailoring of all those fitting parameters more confusing than
>applying Kirchoff ad finitum to the circuit.
>Thank you very much for your time.

The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
3635 1.

* (tron) was included for the original Australian and the US editions.

Chapter 2, section 8 probably has everything you need, and then some.
You may need to dig around to find if the 6GH8A is similar to one of the
older types for which data is given in the examples.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

172. RF signal levels: give me a clue!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 15:28:45 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <5ggo1vkm8v6jefeckpau7kfde6aej88skq@4ax.com>
Source record: 38776

Hi all,

I've decided I need to cobble up a relative field-strength meter to carry out some experiments with antenna and PA variations. I want to end up with a meter that can comfortably sense say half a Watt ERP at about 10 feet away from the signal source. Problem is, I can only guess at what the induced voltage in the meter's sniffer coil will be at that combination of power and distance, yet I need a ball park figure to be able to commence designing the amplifier stages for the meter. I'm guessing it'll be in the lowish microvolt range, but that *is* just a figure plucked from out of the air (excuse pun).
Therefore, if anyone's got a more accurate estimate of what I should expect, then please post it here!
I know this a bit like asking how long is a piece of string, but nonetheless I invite the panel's view.

THanks,

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

173. Re: HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 15:31:02 UTC
From: dangett@yahoo.com
Message-ID: <49206ac2.0301080731.9e2a895@posting.google.com>
Source record: 38775

Dear Frank,

I am asking for a donated transmitter to help a friend of mine who operates a full power fm. He is a good guy that helps a lot of people in the broadcast industry...but who also has too much pride to get out here and ask for help himself when he is in need. HE is broke and his transmitter is beyond repair.

As a fellow ham I am asking those BROADCAST ENGINEERS out here with a heart who have been in a similar jam at least once in their careers to help out.

Thanks,

Dan

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message news:<DfUS9.230$UM4.51809@newsfep1-win.server.ntli.net>...
> > A friend of mine is in desperate need of a 5 KW or greater unit. He
> > has no money...so I am asking for a donation. I will pick up and
> > transport it.
> ======
> Intriguing message . I wonder what such a unit will be used for ,I mean a
> transmitter with such a high power rating.
> For a local community radio station I imagine 100 W would be more than
> adequate.
> Just curious.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
> SPAM is readily rejected by Mailwasher www.mailwasher.com

174. Re: RF signal levels: give me a clue!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 17:08:16 UTC
From: mikea@mikea.ath.cx
Message-ID: <avhlu0clm1@puck.litech.org>
Source record: 38777

Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote:

> Hi all,

> I've decided I need to cobble up a relative field-strength meter to
> carry out some experiments with antenna and PA variations. I want to
> end up with a meter that can comfortably sense say half a Watt ERP at
> about 10 feet away from the signal source. Problem is, I can only
> guess at what the induced voltage in the meter's sniffer coil will be
> at that combination of power and distance, yet I need a ball park
> figure to be able to commence designing the amplifier stages for the
> meter. I'm guessing it'll be in the lowish microvolt range, but that
> *is* just a figure plucked from out of the air (excuse pun).
> Therefore, if anyone's got a more accurate estimate of what I should
> expect, then please post it here!
> I know this a bit like asking how long is a piece of string, but
> nonetheless I invite the panel's view.

Why not design for the low-microvolt range, and include a
variable attenuator between the loop and the front end?

This would give you the best of both worlds, particularly
if the attenuator steps are decades or deciBels.

--
IT'S SO HOT IN OKLAHOMA THAT......
A sad Okie once prayed, "I wish it would rain - not so much for me,
cuz I've seen it - but for my 7-year-old."

175. Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 19:50:04 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0301081150.2f2080d5@posting.google.com>
Source record: 38778
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

I have the PSPICE student version, and I am beginning to use the GUI
(instead of the netlist) for the first time.

Does anyone here know how to add models to the PSPICE GUI? I am
trying to add the D1N34A, and I am new to the PSPICE GUI interface.
When I was using the text netlist instead of the GUI, I simply used
the model command in the file.

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

176. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 20:46:17 UTC
From: averyfineman@aol.com
Message-ID: <20030108154617.03862.00000749@mb-cg.aol.com>
Source record: 38645

In article <rjtucke-43C82B.13530607012003@news.west.cox.net>, Ross
<rjtucke@asu.edu> writes:

>Hi there.
>I'm doing this project for school that involves a complete mathematical
>analysis of this receiver that I built. The detector (it's a
>regenerative design) uses a grid-leak method on a 6GH8A pentode.
>Let me hasten to say that I'm not asking you for all that! I've got it
>almost done (I hope) except I need a model for the control grid current.
>It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I
>find the tailoring of all those fitting parameters more confusing than
>applying Kirchoff ad finitum to the circuit.
>Thank you very much for your time.
>
>Sincerely,
>Ross

The suggestions of Everitt's book or Radiotron Designer's
Handbook are good basic stuff for background (the latter is
probably easier to find as a reference...my "Everitt" is a 1932
edition and somewhat rare).

A problem there is that few tube makers published control
grid current curves in the positive bias region. [I have no
reference on any 6GH8] To do a good work-up on analysis,
those can be done by yourself using a low-duty-cycle
pulsed test rig that is relatively easy to build using an
ordinary "555" timer or equivalent capable of producing the
peak positive voltage you think is needed.

A duty cycle of 1 to 5% on a repetitive pulse should be safe
enough to avoid excess grid current. A small resistor of 1 to
100 Ohms inserted at the "bottom" of the grid return resistor
can show the grid current measured as a voltage drop and
displayed on one channel of a dual-channel oscilloscope.
The other channel can show the grid pulse voltage. Both
channels would be DC-coupled.

Measurements would be manual and thus a lot of notation
by hand. The plate (and screen) voltages could be made
variable to see the effects of plate potential on the control
grid current in the positive region. That yields a good
baseline of positive-potential grid bias characteristics to use
in any analysis...for one particular vacuum tube.

There is no absolute "rule" on tube grid current in the positive region. Various tube type geometries differ quite a bit from one another...one of the "charms" of "old world" circuit design. :-)

For another, newer reference text I would suggest "Pulse, Digital, and Swtiching Waveforms" by Jacob Millman and Herbert Taub, Prentice-Hall 1965. That text covers both vacuum tubes and semiconductors, including positive-grid voltage conditions in tubes.

Len Anderson
retired (from regular hours) electronic engineer person

177. Re: Ext. battery pack for Yaesu vx5r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 20:55:56 UTC
From: Sylvan Butler <Znospam+noZs_0301@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnb1p42b.mcl.Znospam+noZs_0301@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 38779

On Sat, 04 Jan 2003 15:55:33 -0500, Bill Gates cabin boy <bill@gates.com> wrote:
> On Thu, 2 Jan 2003 23:59:24 +0800, "Daniel" <daniel@chan.net> wrote:
>>Q3. which type is the better, lead-acid or NiCd/NiMh cell ?
>
> Take your pick based on cost and availability. Do you already
> have a charger for one or the other?

Other considerations... Portable vs stationary? Stationary it is
almost impossible to beat the price/performance of flooded
lead-acid. Adding water allows one to compensate for electrolyte
loss due to overcharge. Of course then you MUST do the
maintenance... Going maint-free means you loose that advantage.
Flooded are still more robust re. overcharge. Once you go to any
gelled or starved electrolyte cell, you don't want to overcharge
because if the electrolyte boils off, your battery is damaged.

lead-acid is usually cheaper energy storage. NiCd is lighter weight
(physically) for the same storage capacity but costs more. NiMH is
lighter still and costs more than NiCd (but the price difference is
rapidly decreasing). Lead-acid is damaged by being left less than
100% charged but Ni?? doesn't care. NiCd and NiMH can be easily
damaged by being overcharged. NiCd is one of the best at accepting
high charge rates (1C is typical and even higher rates can often be
used) as long as the charge is terminated when complete or if the
cell heats excessively. NiMH is almost as good. Lead-acid usually
doesn't like charge rates above about C/5 and usually only flooded
cells and some AGM can tolerate that fast.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

178. Re: Wanted: QRP LP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-08 23:39:01 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301081539.6bd54de8@posting.google.com>
Source record: 38780

30MHz and under, though specifically it's initial (and perhaps only)
use is for a 10 meter beacon.

Can you point me towards schematic/instructions for the type of filter
you refer to?

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:<IbzS9.327$9l3.115749@newsfep2-win.server.ntli.net>...
> > Wondering if someone has a LP filter (commercial or homebrew)
> > collecting dust in a corner of the shack that they'd be willing to
> > sell? Won't have more than 20W applied to it. Please reply to e-mail
> > in this message. tnx es 73, Casey, KS7J
> ========================
> Could you be somewhat more specific . If Low Pass ,what would be the
> required cut-off freq .
> Is is for a mono or multi-band transmitter ?
>
> For QRP level of power (up to 5 Watts RF) simple homebrew filters can be
> made with small iron dust toroids in the Txx-6 range.
>
> Frank gm0csz.kn6wh@ntlworld.com

179. Re: RF signal levels: give me a clue!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 01:40:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0301081740.4059b2f8@posting.google.com>
Source record: 38781

As Mike said, you might think about making it as sensitive as you reasonably can, and using attenuators to get to the full scale you want.

With passive detector circuits (diodes), you'll have trouble getting below about 100uV minimum sensitivity. It's possible to do a bit better, but not much (especially not with a "cobbled" solution). On the other hand, with half a watt radiated and only 10 feet away, you should have no trouble picking up many millivolts, with the right probe. You didn't mention the frequency...if it's below 100MHz, 10 feet will be near-field and the magnetic and electric fields won't as a rule be in the far-field 377-ohm ratio, so there may be significant differences between electric and magnetic field probes. At 1GHz, a 1/4 wave whip receiving antenna should get you roughly 40 millivolts into 50 ohms, 10 feet from a half-watt source.

Analog Devices (and others now, too, I believe) make some sensitive active RF detector chips that will give you an output voltage linearly proportional to the log of the input voltage: linear in dB. That seems the easy way to go if they cover your desired frequency range. Some time ago, I did a similar thing with a Schottky diode detector and a very low input bias, very low offset op amp connected as a log amplifier, but now I'd probably use one of the AD parts. You likely wouldn't need an attuator, because you can get several tens of dB range with them.

And of course, there's a lot to be said for just trying it and seeing what you get.

Cheers,
Tom

Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote in message news:<5ggo1vkm8v6jefeckpau7kfde6aej88skq@4ax.com>...
> Hi all,
>
> I've decided I need to cobble up a relative field-strength meter to
> carry out some experiments with antenna and PA variations. I want to
> end up with a meter that can comfortably sense say half a Watt ERP at
> about 10 feet away from the signal source. Problem is, I can only
> guess at what the induced voltage in the meter's sniffer coil will be
> at that combination of power and distance, yet I need a ball park
> figure to be able to commence designing the amplifier stages for the
> meter. I'm guessing it'll be in the lowish microvolt range, but that
> *is* just a figure plucked from out of the air (excuse pun).
> Therefore, if anyone's got a more accurate estimate of what I should

> expect, then please post it here!
> I know this a bit like asking how long is a piece of string, but
> nonetheless I invite the panel's view.
>
> THanks,
>
> p.

180. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 01:45:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0301081745.77a565e5@posting.google.com>
Source record: 38782
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:<DTFli2AcIBH+Ewpj@jmwa.demon.co.uk>...
...
>
> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
> 3635 1.
>
> * (tron) was included for the original Australian and the US editions.
>
> Chapter 2, section 8 probably has everything you need, and then some.
> You may need to dig around to find if the 6GH8A is similar to one of the
> older types for which data is given in the examples.

Another book to look for is the one from the MIT/RadLab series which
deals with vacuum tube characteristics. My uncle showed me the
section he wrote, which happened to deal specifically with
electrometer tubes and characterization of the grid current for them,
so I know it's in there. Sorry I can't give a more exact reference.

Cheers,
Tom

181. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 02:04:29 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <i4mp1vous6eoonsl8i8ev9ch6dkm9kaj37@4ax.com>
Source record: 38783
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

On 8 Jan 2003 17:45:36 -0800,
k7itm@aol.com (Tom Bruhns),
In Newsgroup: sci.electronics.design,
Article: <3200347.0301081745.77a565e5@posting.google.com>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|John Woodgate <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:<DTFli2AcIBH+Ewpj@jmwa.demon.co.uk>...
|...
|>
|> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
|> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
|> 3635 1.
|>
|> * (tron) was included for the original Australian and the US editions.
|>
|> Chapter 2, section 8 probably has everything you need, and then some.
|> You may need to dig around to find if the 6GH8A is similar to one of the
|> older types for which data is given in the examples.
|
|Another book to look for is the one from the MIT/RadLab series which
|deals with vacuum tube characteristics. My uncle showed me the
|section he wrote, which happened to deal specifically with
|electrometer tubes and characterization of the grid current for them,
|so I know it's in there. Sorry I can't give a more exact reference.
|
|Cheers,
|Tom

My copy, "Radiotron", is Fourth Edition, 1952 ;-)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

182. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 05:06:30 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E1D0356.81354F3C@sympatico.ca>
Source record: 38784

Check out Elecraft, http://www.elecraft.com/,
the K2 has most of what you are looking for except I believe the AM/FM
capability.

Also try http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
which I believe is in RSGB.

If you are doing it yourself, how difficult it is depends a fair bit on the
performance you want.
ADI is making a DDS that clocks at 300 MHz and I believe they have one a 1 GHz
now
- a little power hungry for "mobile"

QST Dec, 1981 has "A Modern Upconverting General-Coverage Receiver"
has AM & SSB.

Bill
VE3JHU

zindazenda wrote:

> more info.....
> also has to be able to band switch and have AM and FM capability also....LCD
>
> will check out "hands" tnx
> "zindazenda" <zen@lineisp.co.uk> wrote in message
> news:1041447552.778877@auth2.dns.griffin.net.uk...
> > First of all Happy New Year.
> >
> >
> > looking to build an hf dds (mobile rig) all band (preferably general
> > coverage.) so.................
> > does anyone have construction details of such a project ie. magazine/web
> > projects.I have found a fair bit on the web, but am wondering if a kit is
> > available for the dds (to save time) and of peoples experiences of such a
> > project.
> > tnx G0ZEN
> >
> >
> >
> >

183. high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 09:25:29 UTC
From: n1jpr@hotmail.com
Message-ID: <95a201e0.0301090125.66242c3@posting.google.com>
Source record: 38785

Brethren,

I want to put a cheapo general coverage HF RX on my car,
and use a whip antenna, CB-length at most.

I have noticed that in my area FM TV and AM RF fields are so
ridiculously intense that even professional active antennas have a
hard time coping with them. In fact, even good quality car radios
have a hard time getting anything unless you REMOVE THE ANTENNA.

Before I embark on building a complicated wideband high-intercept
point matching preamp, which may turn out to be unusable, I wonder if
anyone knows how to design a contraption with these features:

5-20 MHz BANDPASS, A BIT OF ATTENUATION OF AM AND FM BC

INPUT MATCHING A SHORT WHIP (3-5 ft)

OUTPUT INTO 50 OHM

I am tempted to design something of this kind:

1) Pi network, fc=2.5MHz, Zi=Zo=800 ohm

2) Wideband stepdown RF transformer, Zi=800ohm, Zo=200ohm

3) T network, Fc=40MHz, Zi=Zo=200ohm

4) Wideband stepdown RF transformer, Zi=200ohm, Zo=50ohm

[for both 2 and 4:
winding ratio = 2 to 1
ZLi >= 3 times Zi @ 9MHz]

5) Wideband amp at 50 ohm for ham signals,
or nothing for major broadcasters.

What do you think?

BR, & TIA from Milan

Filippo N1JPR/I2

184. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 09:39:04 UTC
From: n1jpr@hotmail.com
Message-ID: <95a201e0.0301090139.36137b1d@posting.google.com>
Source record: 38786
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

>> their LO's and
> > transmitter spectral output has to be squeaky clean

Yeah, in a pig's eye....

Think of avionics:
it's FORBIDDEN to use cellphones on planes, although the avionics
should be immune from out-of band signals.

I thought this was bullshit until I had a truly bizarre incident.

I was at Boston Logan, flying out to Chicago, and I carried an old,
supposedly high quality, European GSM phone, ___900 MHz ONLY___.

On arrival, not only I discovered that my thoroughly unusable phone
(which I had kept off for a week) had switched on accidentally in my
bag. IT ALSO HAD RECEIVED A TEXT MESSAGE FROM ITALY. I later checked
with my provider, who confirmed that a message was delivered while I
was in the US.

This means it managed a successful RF and protocol handshake,
validation, and transaction, on a frequency is was not at all supposed
to cover.

I can only guess that I was very close to a 800 MHz US GSM BTS, and
that signals somehow broke thru out of band both ways.

From then on, I took the airline cellphone ban much more seriously,
and claims of spectral purity much less so!

185. Re: Ext. battery pack for Yaesu vx5r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 11:47:42 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <c_eT9.2941$Fm.124255@newsfep1-win.server.ntli.net>
Source record: 38788

> lead-acid is usually cheaper energy storage. NiCd is lighter weight
> (physically) for the same storage capacity but costs more. NiMH is
> lighter still and costs more than NiCd (but the price difference is
> rapidly decreasing). Lead-acid is damaged by being left less than
> 100% charged but Ni?? doesn't care. NiCd and NiMH can be easily
> damaged by being overcharged. NiCd is one of the best at accepting
> high charge rates (1C is typical and even higher rates can often be
> used) as long as the charge is terminated when complete or if the
> cell heats excessively. NiMH is almost as good. Lead-acid usually
> doesn't like charge rates above about C/5 and usually only flooded
> cells and some AGM can tolerate that fast.
==========
Perhaps it is worthwhile mentioning that ,especially NiMH batteries have a
relatively high 'self discharge' rate.
To be ready for delivering energy on demand at all times continuous trickle
charging ,when not in portable use, is recommended . The same applies to
NiCads being it that their self discharge is somewhat less.

Frank gm0csz.kn6wh@ntlworld.com

186. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 11:58:10 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1042113491.909922@cswreg.cos.agilent.com>
Source record: 38787
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

"SpamLover" <n1jpr@hotmail.com> wrote in message
news:95a201e0.0301090139.36137b1d@posting.google.com...
> >> their LO's and
> > > transmitter spectral output has to be squeaky clean
>
> Yeah, in a pig's eye....
>
> Think of avionics:
> it's FORBIDDEN to use cellphones on planes, although the avionics
> should be immune from out-of band signals.
>
> I thought this was bullshit until I had a truly bizarre incident.
>
> I was at Boston Logan, flying out to Chicago, and I carried an old,
> supposedly high quality, European GSM phone, ___900 MHz ONLY___.
>
> On arrival, not only I discovered that my thoroughly unusable phone
> (which I had kept off for a week) had switched on accidentally in my
> bag. IT ALSO HAD RECEIVED A TEXT MESSAGE FROM ITALY. I later checked
> with my provider, who confirmed that a message was delivered while I
> was in the US.
>
> This means it managed a successful RF and protocol handshake,
> validation, and transaction, on a frequency is was not at all
supposed
> to cover.
>
> I can only guess that I was very close to a 800 MHz US GSM BTS, and
> that signals somehow broke thru out of band both ways.
>
> From then on, I took the airline cellphone ban much more seriously,
> and claims of spectral purity much less so!

The US has some 900MHz GSM networks, so your phone may well
have just been doing what it should.

There were some tests done on commercial aircraft for field strengths
from various sources, including the use of cellular phones. The
largest
field strength in the cabin by a very large margin was leakage from
the
microwave ovens.

However, use of mobile phones is an unnecessary extra risk, and could also cause network problems (hand-off assumptions in the network don't include 600mph speeds, and the large coverage due to the extra height could be a problem).

Regards
Ian

187. Re: Wanted: QRP LP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 12:11:27 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <d_eT9.2942$Fm.124255@newsfep1-win.server.ntli.net>
Source record: 38789

> 30MHz and under, though specifically it's initial (and perhaps only)
> use is for a 10 meter beacon.
=========
That means you need a socalled TVI filter cutting off frequencies above say
40 MHz

This filter is described in ARRL Handbook (the latest one I have is from
1995)

In the above publication LP filters are described on page 10.21 and the
specific TVI filter parameters can be found on page 30.22
The filter dimensions indicate use in high output transmitters , but for QRP
(or in your case a power level of 20 Watts) the required inductors can be
readily made with suitable toroids with the inductance to be checked at the
operating frequency with for example a MFJ-259B antenna analyser. If you
have access to such an instrument ,the completed filter can then be assessed
with a spectrum analyser .

I am sure this type of LP filter is also included in more recent ARRL
Handbooks ,since its purpose is to prevent TVI caused by HF transmitters.

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

188. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 12:25:57 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <e_eT9.2943$Fm.124255@newsfep1-win.server.ntli.net>
Source record: 38790

> I want to put a cheapo general coverage HF RX on my car,
> and use a whip antenna, CB-length at most.
>
> I have noticed that in my area FM TV and AM RF fields are so
> ridiculously intense that even professional active antennas have a
> hard time coping with them. In fact, even good quality car radios
> have a hard time getting anything unless you REMOVE THE ANTENNA.
==========
If you don't get interference when the antenna is removed you can insert a Band Pass filter which attenuates freqs below say 2 MHz (to suppress medium wave AM sigs) and attenuates VHF sigs above say 40 MHz from TV-band 1 -and FM BC stations).
In fact a combination of a High Pass - and a Low Pass - filter.

These filters are explained and described in ,among others, the ARRL handbooks.

The filter should be fully enclosed in metal (properly bonded to the car chassis with the shortest possible strap) and connected to HF radio and antenna via good quality coax cable.

Frank gm0csz.kn6wh@ntlworld.com

189. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 13:13:44 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <avk520kqn1@news8.svr.pol.co.uk>
Source record: 38793
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301081150.2f2080d5@posting.google.com...
> I have the PSPICE student version, and I am beginning to use the GUI
> (instead of the netlist) for the first time.
>
> Does anyone here know how to add models to the PSPICE GUI? I am
> trying to add the D1N34A, and I am new to the PSPICE GUI interface.
> When I was using the text netlist instead of the GUI, I simply used
> the model command in the file.

sci.electronics.cad might be a better place for this. All the SPICE experts
tend to lurk there.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

190. Re: RF signal levels: give me a clue!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 13:40:08 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <e_eT9.2944$Fm.124255@newsfep1-win.server.ntli.net>
Source record: 38791

> With passive detector circuits (diodes), you'll have trouble getting
> below about 100uV minimum sensitivity. It's possible to do a bit
> better, but not much (especially not with a "cobbled" solution). On
> the other hand, with half a watt radiated and only 10 feet away, you
> should have no trouble picking up many millivolts, with the right
> probe. You didn't mention the frequency...if it's below 100MHz, 10
> feet will be near-field and the magnetic and electric fields won't as
> a rule be in the far-field 377-ohm ratio, so there may be significant
> differences between electric and magnetic field probes. At 1GHz, a
> 1/4 wave whip receiving antenna should get you roughly 40 millivolts
> into 50 ohms, 10 feet from a half-watt source.
>
> Analog Devices (and others now, too, I believe) make some sensitive
> active RF detector chips that will give you an output voltage linearly
> proportional to the log of the input voltage: linear in dB. That
> seems the easy way to go if they cover your desired frequency range.
> Some time ago, I did a similar thing with a Schottky diode detector
> and a very low input bias, very low offset op amp connected as a log
> amplifier, but now I'd probably use one of the AD parts. You likely
> wouldn't need an attuator, because you can get several tens of dB
> range with them.
==========
Perhaps it is useful to refer to an article in QST- June 2001 (p 38 -43) :
Simple RF-Power Measurement ,by Wes Hayward ,W7ZOI & Bob Larkin, W7PUA ,
employing the Analog Devices Log Amp chip AN8307 (0.1 -500 MHz) with a
sensitivity
of better than - 65 dBm . This (home brew) instrument fitted with a short
whip could
serve as a sensitive relative field strength meter.
Analog Devices supply free samples of this and other chips.

Frank gm0csz.kn6wh@ntlworld.com

191. Wanted Heliax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 13:52:10 UTC
From: K4JA <k4ja@crosslink.net>
Message-ID: <3e1d7e8c$0$1818@dingus.crosslink.net>
Source record: 38792

Wanted to Buy 1/2" or 5/8" Heliax in good condition. Need 9 180' runs
total or about 1700'

192. Re: HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 16:09:08 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <iu6r1vc2kuif1jcmu3kqrnh0r54k46qssd@4ax.com>
Source record: 38795

On 8 Jan 2003 07:31:02 -0800, dangett@yahoo.com (Dan Gett) opined
thusly:

>Dear Frank,
>
>I am asking for a donated transmitter to help a friend of mine who
>operates a full power fm. He is a good guy that helps a lot of people
>in the broadcast industry...but who also has too much pride to get out
>here and ask for help himself when he is in need. HE is broke and his
>transmitter is beyond repair.
>
>As a fellow ham I am asking those BROADCAST ENGINEERS out here with a
>heart who have been in a similar jam at least once in their careers to
>help out.

If he's broke, how's he going to afford the electricity to run such a
monster? Or would he like a free generator as well?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

193. Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 16:26:11 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <ee8r1vg82u4vuabm2nfas2b7fld2db6gtg@4ax.com>
Source record: 38698
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

I can't seem to get a BC337 to provide any worthwhile voltage gain
with any signal over about 200Khz. However, the quoted transition
frequency for this device is 200Mhz. Anyone have any ideas as to what
the problem might be? Surely I'm not expecting too much of the BC337
at such a low frequency?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

194. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 17:10:40 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E1DAD10.59E20953@mfi.net>
Source record: 38794
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
Jim Thompson wrote:
>
> On 8 Jan 2003 17:45:36 -0800,
> k7itm@aol.com (Tom Bruhns),
> In Newsgroup: sci.electronics.design,
> Article: <3200347.0301081745.77a565e5@posting.google.com>,
> Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
> Wrote the following:
>
> |John Woodgate <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:<DTFli2AcIBH+Ewpj@jmwa.demon.co.uk>...
> |...
> |>
> |> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
> |> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
> |> 3635 1.
> |>
> |> * (tron) was included for the original Australian and the US editions.
> |>
> |> Chapter 2, section 8 probably has everything you need, and then some.
> |> You may need to dig around to find if the 6GH8A is similar to one of the
> |> older types for which data is given in the examples.
> |
> |Another book to look for is the one from the MIT/RadLab series which
> |deals with vacuum tube characteristics. My uncle showed me the
> |section he wrote, which happened to deal specifically with
> |electrometer tubes and characterization of the grid current for them,
> |so I know it's in there. Sorry I can't give a more exact reference.
> |
> |Cheers,
> |Tom
>
> My copy, "Radiotron", is Fourth Edition, 1952 ;-)
>
> ...Jim Thompson
> --
> | James E.Thompson, P.E. | mens |
> | Analog Innovations, Inc. | et |
> | Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
> | Phoenix, Arizona Voice:(480)460-2350 | |
> | Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
> | http://www.analog-innovations.com | 1962 |
>
```

> For proper E-mail replies SWAP "-" and "_"
>
> I love to cook with wine. Sometimes I even put it in the food.

So is mine. I knew an old man who sold used books at a flea market,
and when he found that I was interested in the older electronics books
he would put aside anything he found till I got a look at them. I
bought quite a few from him, but he died of cancer a few years ago, and
I haven't seen another good deal, other than Skolnik's RADAR book.
--

Michael A. Terrell
Central Florida

195. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 17:43:25 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <1xiT9.34811$p_6.2954299@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38796

I remember that article; it was a pretty good unit. I believe that the author of that article used a hybrid design, premixing a VFO with the synthesizer, using thumbwheel switches for band selection. I have come up with a newer design that uses off the shelf parts, and would be glad to forward that info to interested parties. I know that I do mention this from time to time, but there still seems to be some interest in this design.

Pete

Bill Kirkland <kirklandb@sympatico.ca> wrote in message news:3E1D0356.81354F3C@sympatico.ca...
> Check out Elecraft, http://www.elecraft.com/,
> the K2 has most of what you are looking for except I believe the AM/FM
> capability.
>
> Also try http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
> which I believe is in RSGB.
>
> If you are doing it yourself, how difficult it is depends a fair bit on
the
> performance you want.
> ADI is making a DDS that clocks at 300 MHz and I believe they have one a 1
GHz
> now
> - a little power hungry for "mobile"
>
> QST Dec, 1981 has "A Modern Upconverting General-Coverage Receiver"
> has AM & SSB.
>
> Bill
> VE3JHU
>
>
>
> zindazenda wrote:
>
> > more info.....
> > also has to be able to band switch and have AM and FM capability
also....LCD
> >
> > will check out "hands" tnx
> > "zindazenda" <zen@lineisp.co.uk> wrote in message
> > news:1041447552.778877@auth2.dns.griffin.net.uk...
> > > First of all Happy New Year.
> > >

> > >
> > > looking to build an hf dds (mobile rig) all band (preferably general
> > > coverage.) so.................
> > > does anyone have construction details of such a project ie.
magazine/web
> > > projects.I have found a fair bit on the web, but am wondering if a kit
is
> > > available for the dds (to save time) and of peoples experiences of
such a
> > > project.
> > > tnx G0ZEN
> > >
> > >
> > >
> > >
>

196. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 17:51:58 UTC
From: averyfineman@aol.com
Message-ID: <20030109125158.12672.00000005@mb-cs.aol.com>
Source record: 38547

>Subject: Re: building hf dds rig help..
>From: Bill Kirkland <kirklandb@sympatico.ca>
>Date: Thu, 09 Jan 2003 00:06:30 -0500

>If you are doing it yourself, how difficult it is depends a fair bit on the
>performance you want.
>ADI is making a DDS that clocks at 300 MHz and I believe they have one a 1
>GHz now - a little power hungry for "mobile"

The following is a quote from this morning's RF Design magazine
e-mail newsletter that might be worth investigating:

==========

RF Design Staff
Norwood, Mass. -- Analog Devices Inc., a developer of semiconductors for signal processing applications introduced its new family of direct digital synthesizers (DDS):

• The AD9951 -- a basic DDS with on-board 14-bit DAC,
• The AD9952 with high-speed comparator,
• The AD9953 with RAM, which allows nonlinear phase and frequency sweeping, and
• The AD9954 with high-speed comparator, RAM and automatic linear frequency sweep.

According to the company, the new chips deliver a 400 MHz clock speed at one-tenth the power consumption of previous systems. If true, it would enable designers to use DDS for fast-frequency hopping at higher output frequencies in more power-sensitive applications. Typical applications include satellite communications, broadband networking, radar, test and measurement, and instrumentation.

Analog Devices also says its new DDS devices are the first in the industry to clock at 400 Msps and synthesize frequencies of up to 160 MHz, while dissipating less than 200 mW of power. With this advancement, designers can use multiple chips on a single PCB with less concern for thermal issues, the company says.

All parts are available now in 48-lead EPAD-TQFP packages and are priced per unit in 1,000-piece quantities as follows:

• AD9951 -- $13.75,
• AD9952 -- $15.50;
• AD9953 -- $14.75; and
• AD9954 -- $17.25.

==========

Len Anderson
retired (from regulat hours) electronics engineer person

197. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 17:52:04 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <lmdr1vko1nj3qhn6uc868pbhpbol6kuvoi@4ax.com>
Source record: 38697
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
On Thu, 09 Jan 2003 12:10:40 -0500,
"Michael A. Terrell" <terrell@mfi.net>,
In Newsgroup: sci.electronics.design,
Article: <3E1DAD10.59E20953@mfi.net>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|Jim Thompson wrote:
|>
[snip]
|> |John Woodgate <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:<DTFli2AcIBH+Ewpj@jmwa.demon.co.uk>...
|> |...
|> |>
|> |> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
|> |> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
|> |> 3635 1.
|> |>
|> |> * (tron) was included for the original Australian and the US editions.
|> |>
[snip]
|> My copy, "Radiotron", is Fourth Edition, 1952 ;-)
|>
|> ...Jim Thompson
|
| So is mine. I knew an old man who sold used books at a flea market,
|and when he found that I was interested in the older electronics books
|he would put aside anything he found till I got a look at them. I
|bought quite a few from him, but he died of cancer a few years ago, and
|I haven't seen another good deal, other than Skolnik's RADAR book.

I bought mine *new* ;-)

...Jim Thompson
--
| James E.Thompson, P.E. | mens |
| Analog Innovations, Inc. | et |
| Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
| Phoenix, Arizona Voice:(480)460-2350 | |
| Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
| http://www.analog-innovations.com | 1962 |

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.
```

198. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 18:07:35 UTC
From: Graham Holloway <eng@wps-electronics.demon.co.uk>
Message-ID: <avkdrm$k13$1$8302bc10@news.demon.co.uk>
Source record: 38699
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message
news:ee8r1vg82u4vuabm2nfas2b7fld2db6gtg@4ax.com...
>
>
> Hi,
>
> I can't seem to get a BC337 to provide any worthwhile voltage gain
> with any signal over about 200Khz. However, the quoted transition
> frequency for this device is 200Mhz. Anyone have any ideas as to what
> the problem might be? Surely I'm not expecting too much of the BC337
> at such a low frequency?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

The components around the BC337 are limiting the frequency response and
perhaps the circuit configuration, whatever it may be.

--

Graham Holloway

199. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 18:12:58 UTC
From: Jeff Verive <jeff.verive@tellabs.com>
Message-ID: <KYiT9.28$UG1.33111@news.uswest.net>
Source record: 38700
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

If the device's power supply pins are decoupled properly, perhaps your signal is getting reduced by an unintentional low-pass filter created by both intentional and parasitic circuit elements. At these frequencies, parasitic capacitance and skin effect can create a very effective low-pass filter. Impedance of the source, input, and transmission line connecting them should match, as well as the output, load, and transmission line connecting these elements.

Jeff
"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message
news:ee8r1vg82u4vuabm2nfas2b7fld2db6gtg@4ax.com...
>
>
> Hi,
>
> I can't seem to get a BC337 to provide any worthwhile voltage gain
> with any signal over about 200Khz. However, the quoted transition
> frequency for this device is 200Mhz. Anyone have any ideas as to what
> the problem might be? Surely I'm not expecting too much of the BC337
> at such a low frequency?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

200. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 19:40:06 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <mvXsNCCWAdH+EwuW@jmwa.demon.co.uk>
Source record: 38704
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <ee8r1vg82u4vuabm2nfas2b7fld2db6
gtg@4ax.com>) about 'Limitations of the BC337', on Thu, 9 Jan 2003:
>
>
>Hi,
>
>I can't seem to get a BC337 to provide any worthwhile voltage gain
>with any signal over about 200Khz. However, the quoted transition
>frequency for this device is 200Mhz. Anyone have any ideas as to what
>the problem might be? Surely I'm not expecting too much of the BC337
>at such a low frequency?
>
We cannot possibly determine the problem without details of how you are
using the device. For 1 transistor, you could manage an ASCII art
schematic, if you take one of Win Hill's as a tutorial.

How much voltage gain is 'worthwhile'?
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

201. Re: Quad FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 20:23:31 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E1DDA43.E40E883@sympatico.ca>
Source record: 38702

I think there are lots around, i.e. lots of FET switches. Maxim makes quite
a few.
Also check:
SD8901 from Calogic Corporation
SD5000 from Siliconix
74FST3125 see http://www.qsl.net/pa3ckr/

Communications Quarterly in Fall 1994 reported on an "H-mode" mixer in
"G3SBI's H-Mode Receiver Design"

Do a search on the web for "H-mode mixer" as well.
Check out http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm

Bill
VE3JHU

Philip de Cadenet wrote:

> A question on behalf of a friend.
>
> He asks:
>
> I'm wondering if anyone makes a quad FET like the old Siliconix Si8909
> anymore. That was designed as an active balanced mixer, that could make
> a front end about as immune to overload as you could possibly imagine.
>
> Appreciate any thoughts.
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> 1050 WLYC
> Williamsport
> Pa

202. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 20:27:04 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <5pmr1voh5deoeqr0vr7do7a89oqketc00u@4ax.com>
Source record: 38701
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

On 8 Jan 2003 11:50:04 -0800,
jason_hsu@my-deja.com (Jason Hsu),
In Newsgroup: sci.electronics.cad,
Article: <f7d9a152.0301081150.2f2080d5@posting.google.com>,
Entitled: "Adding models to PSPICE GUI",
Wrote the following:

|I have the PSPICE student version, and I am beginning to use the GUI
|(instead of the netlist) for the first time.
|
|Does anyone here know how to add models to the PSPICE GUI? I am
|trying to add the D1N34A, and I am new to the PSPICE GUI interface.
|When I was using the text netlist instead of the GUI, I simply used
|the model command in the file.
|
|Jason Hsu, AG4DG
|usenet@@@jasonhsu.com

Use the LIB part, fill in the blank for the Drive/Path/Libraryname.lib

I assume LIB is available in the student version?? Charlie?

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

203. Getting hiss along with strong CW signals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 20:36:58 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0301091236.5b3fc48d@posting.google.com>
Source record: 38703

I'm getting a hiss that accompanies very strong CW signals out of my HB 20m single conversion superhet receiver. There is no hiss on the quieter CW notes. The receiver is pretty straight forward...antenna into a SA602AN first miser, followed by a 2N2222 emitter follower amp then through a 3 4.915Mhx crystal filter terminated into 220ohms, then through a SA602AN BFO outputing differentially into a NE5532 LPF then onto a LM386 final audio amp.

Any idea where to start looking? One of the audio sections was breaking into oscillation when the strong signal arrived but I changed a few output/coupling cap values and that's largely gone away. Is the hiss a sign that I'm still getting some oscillation?

Thanks,

Bill
K4VIB

204. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 21:11:48 UTC
From: Robert Baer <robertbaer@earthlink.net>
Message-ID: <3E1DE5E0.5BB2695E@earthlink.net>
Source record: 38706
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate wrote:
>
> I read in sci.electronics.design that Ross <rjtucke@asu.edu> wrote (in
> <rjtucke-43C82B.13530607012003@news.west.cox.net>) about 'NEED ADVICE:
> Vacuum tube grid current?', on Tue, 7 Jan 2003:
> >I'm doing this project for school that involves a complete mathematical
> >analysis of this receiver that I built. The detector (it's a
> >regenerative design) uses a grid-leak method on a 6GH8A pentode.
> >Let me hasten to say that I'm not asking you for all that! I've got it
> >almost done (I hope) except I need a model for the control grid current.
> >It's a function of Vg and Vp, I beleive. And no, I'm not using SPICE- I
> >find the tailoring of all those fitting parameters more confusing than
> >applying Kirchoff ad finitum to the circuit.
> >Thank you very much for your time.
>
> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
> 3635 1.
>
> * (tron) was included for the original Australian and the US editions.
>
> Chapter 2, section 8 probably has everything you need, and then some.
> You may need to dig around to find if the 6GH8A is similar to one of the
> older types for which data is given in the examples.
> --
> Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
> Interested in professional sound reinforcement and distribution? Then go to
> http://www.isce.org.uk
> PLEASE do NOT copy news posts to me by E-MAIL!

I have an RCA Radiotron; if someone needs, i would be glad to scan up
to about a dozen pages at 200DPI in GIF (most compact) and send the set
of scans (PDF and ZIP makes it larger).
Any specified page or part (like a graph) i would be then glad to scan
at higher (specify) resolution.

205. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 21:19:39 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <avko7btag1@news5.svr.pol.co.uk>
Source record: 38705
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote in message
news:ee8r1vg82u4vuabm2nfas2b7fld2db6gtg@4ax.com...
>
>
> Hi,
>
> I can't seem to get a BC337 to provide any worthwhile voltage gain
> with any signal over about 200Khz. However, the quoted transition
> frequency for this device is 200Mhz. Anyone have any ideas as to what
> the problem might be? Surely I'm not expecting too much of the BC337
> at such a low frequency?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

That 200kHz will be due to, too high a gain, capacitive loading effects,
high source resistance.

At a gain of say 10x, then the BC337 trannie is only capable of a flat
20MHz. A gain of 100 and the trannie can only do a flat 2MHz.
This assumes *no* capacitive loading across the collector resistor and that
the source or driving impedance is *very* low.

Assume your circuit has (say) a gain of x20.
This instantly sets an upper frequency limit (-3dB or 70% gain) of 10MHz.

If your design also has say a 1k collector load with 5pF of stray
capacitance across it, (quite normal) and another 5pf of 10:1 scope probe
capacitance hooked onto the collector, then this will cause a simple RC
low-pass filter, with yet another low-pass break frequency of 1/(2*pi*C*R)
this one is 16MHz.

That's 2 things we have (effects are both running together) that are now
killing the HF gain off.
Add a third! called 'Miller effect'.
This is yet another RC low-pass filter. The 'R' in this case is the
source-impedance driving the trannie. The 'C' is the trannie 'base-collector
capacitance' (plus strays) who's combined effect is stepped up by the
trannie gain (the "Miller effect" bit).
Say the actual Cbc+strays is 3pF and that your circuit is being driven from
a 50ohm sine generator. As the trannie gain is 20x then the 3pF of
collector-base capacitance has an effective value of 60pF. Yet again ...

1/(2*pi*R*C) gives the third roll-off at 53MHz.

So ... There are 3 low-pass roll-offs all at work together, 10Mhz, 16MHz and 53MHz. If you're looking at the waveform on a scope, then expect to notice the response start dropping off in the 3-5MHz area.
In your case the figure is a very low 200kHz!, which implies a designed gain of (say) x100 with a signal source of 2k7ohms or a gain of x100 with a low source R but a collector resistor of (say) 4k7 with 170pF of loading, (or any mixture of these two effects).

This stuff is the magical part of analogue design and to get a decent H.F. response you need to try a number of tricks/techniques. The easiest is to keep the gain low and design the collector resistance to be as low as possible. Keep the source impedance as low as possible. Use 'R.F' transistors with high Ft's and low collector-base capacitances. Keep the collector strays and loading capacitances as low as possible.
As an example ... a single 2N2369 trannie with a 100ohm load can run out to hundreds of MHz at low gains and small strays.
Other (more esoteric) techniques are also available, such as tuning out stray C's by means of added small inductors and the use of 'shaped' feedback.

A HF, wideband, hi-gain ampifier can be a work of art so don't be dismayed to have to use two transistors at HF when one would be OK at LF.
Also bear in mind that the two transistor 'Cascode' circuit is the best technique available for wideband HF work. (other than putting the bits on Silicon ;-)
A Spice circuit can be very useful for this kind of HF stuff, as it saves the wodge of tedious RC 'what-if' knock-on response calculations that need to be done, if one small change is made to a single transistor stage.
regards
john

206. Re: Getting hiss along with strong CW signals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 21:35:30 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <avkpv5$j1q$1@news7.svr.pol.co.uk>
Source record: 38707

do the 385 audio hiss mod, cant remember the exact cap value whichgoes
across 2pins

207. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 21:52:16 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <6frr1vgsq7gjv25i9dimumi602s90ni4qu@4ax.com>
Source record: 38708
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

On Thu, 09 Jan 2003 20:27:04 GMT, Jim Thompson
<Jim-T@analog_innovations.com> wrote:

>On 8 Jan 2003 11:50:04 -0800,
>jason_hsu@my-deja.com (Jason Hsu),
>In Newsgroup: sci.electronics.cad,
>Article: <f7d9a152.0301081150.2f2080d5@posting.google.com>,
>Entitled: "Adding models to PSPICE GUI",
>Wrote the following:
>
>>I have the PSPICE student version, and I am beginning to use the GUI
>>(instead of the netlist) for the first time.
>>
>>Does anyone here know how to add models to the PSPICE GUI? I am
>>trying to add the D1N34A, and I am new to the PSPICE GUI interface.
>>When I was using the text netlist instead of the GUI, I simply used
>>the model command in the file.
>>
>>Jason Hsu, AG4DG
>>usenet@@@jasonhsu.com
>
>Use the LIB part, fill in the blank for the Drive/Path/Libraryname.lib
>
>I assume LIB is available in the student version?? Charlie?
>
> ...Jim Thompson

save your model as a .mod file

open a new project, selecting analogue or mixed A/D

File ... new ... PSPICE Library

model ... import ... then open your model.

tools ... options ... tick "always create part when saving model"

save the model.

To place part, open dialogue as normal and import your custom library.
then place away.

node names will be as listed in your model

Simon

208. FS Svetlana 4CX1600B tube and socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 22:01:19 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3e1df04c_4@corp.newsgroups.com>
Source record: 38709
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

For Sale:

Svetlana 4CX1600B new never been powered up. From a silent keys estate. Box

has been opened and tube plugged into socket (also for sale) from an

amplifier project that unfortunately never happened.

Svetlana 4CX1600B $320.00 plus shipping from 61559

Svetlana SK-3A socket for 4CX1600B 120.00 plus shipping from 61559

The pair for $400.00 plus shipping from 61559

Postal Money Order only please. Thanks Larry WA9VRH

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

209. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 22:01:28 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <h4sr1v01d6oiptn284b4lmp9v6i5mqqfor@4ax.com>
Source record: 38710
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

```
On Thu, 09 Jan 2003 21:52:16 +0000,
Simon <st599@ecs.soton.ac.uk>,
In Newsgroup: sci.electronics.cad,
Article: <6frr1vgsq7gjv25i9dimumi602s90ni4qu@4ax.com>,
Entitled: "Re: Adding models to PSPICE GUI",
Wrote the following:

|On Thu, 09 Jan 2003 20:27:04 GMT, Jim Thompson
|<Jim-T@analog_innovations.com> wrote:
|
|>On 8 Jan 2003 11:50:04 -0800,
|>jason_hsu@my-deja.com (Jason Hsu),
|>In Newsgroup: sci.electronics.cad,
|>Article: <f7d9a152.0301081150.2f2080d5@posting.google.com>,
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|>|I have the PSPICE student version, and I am beginning to use the GUI
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|>|Does anyone here know how to add models to the PSPICE GUI? I am
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|>|When I was using the text netlist instead of the GUI, I simply used
|>|the model command in the file.
|>|
|>|Jason Hsu, AG4DG
|>|usenet@@@jasonhsu.com
|>
|>Use the LIB part, fill in the blank for the Drive/Path/Libraryname.lib
|>
|>I assume LIB is available in the student version?? Charlie?
|>
|> ...Jim Thompson
|
|
|save your model as a .mod file
|
|open a new project, selecting analogue or mixed A/D
|
|File ... new ... PSPICE Library
|
|model ... import ... then open your model.
|
```

|tools ... options ... tick "always create part when saving model"
|
|save the model.
|
|To place part, open dialogue as normal and import your custom library.
|then place away.
|
|node names will be as listed in your model
|
|
|Simon
|

That's for Capture, gag me with a spoon :-(

Real PSpice users not only eat quiche but they use PSpice Schematics.

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

210. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 22:30:47 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <4vtr1vk7gilrcqbqujggsre8q4jcga8i1h@4ax.com>
Source record: 38711
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

```
On Thu, 09 Jan 2003 22:01:28 GMT, Jim Thompson
<Jim-T@analog_innovations.com> wrote:

>On Thu, 09 Jan 2003 21:52:16 +0000,
>Simon <st599@ecs.soton.ac.uk>,
>In Newsgroup: sci.electronics.cad,
>Article: <6frr1vgsq7gjv25i9dimumi602s90ni4qu@4ax.com>,
>Entitled: "Re: Adding models to PSPICE GUI",
>Wrote the following:
>
>|On Thu, 09 Jan 2003 20:27:04 GMT, Jim Thompson
>|<Jim-T@analog_innovations.com> wrote:
>|
>|>On 8 Jan 2003 11:50:04 -0800,
>|>jason_hsu@my-deja.com (Jason Hsu),
>|>In Newsgroup: sci.electronics.cad,
>|>Article: <f7d9a152.0301081150.2f2080d5@posting.google.com>,
>|>Entitled: "Adding models to PSPICE GUI",
>|>Wrote the following:
>|>
>|>|I have the PSPICE student version, and I am beginning to use the GUI
>|>|(instead of the netlist) for the first time.
>|>|
>|>|Does anyone here know how to add models to the PSPICE GUI? I am
>|>|trying to add the D1N34A, and I am new to the PSPICE GUI interface.
>|>|When I was using the text netlist instead of the GUI, I simply used
>|>|the model command in the file.
>|>|
>|>|Jason Hsu, AG4DG
>|>|usenet@@@jasonhsu.com
>|>
>|>Use the LIB part, fill in the blank for the Drive/Path/Libraryname.lib
>|>
>|>I assume LIB is available in the student version?? Charlie?
>|>
>|> ...Jim Thompson
>|
>|
>|save your model as a .mod file
>|
>|open a new project, selecting analogue or mixed A/D
>|
>|File ... new ... PSPICE Library
```

>|
>|model ... import ... then open your model.
>|
>|tools ... options ... tick "always create part when saving model"
>|
>|save the model.
>|
>|To place part, open dialogue as normal and import your custom library.
>|then place away.
>|
>|node names will be as listed in your model
>|
>|
>|Simon
>|
>
>That's for Capture, gag me with a spoon :-(
>
>Real PSpice users not only eat quiche but they use PSpice Schematics.
>
> ...Jim Thompson

My version of PSPICE student doesn't have PSPICE Schematics, only
Capture.

I prefer HSPICE anyway.

Simon

211. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 22:36:14 UTC
From: donrm@soco.agilent.com
Message-ID: <1042151774.900636@cswreg.cos.agilent.com>
Source record: 38712

Jim and Glenna Larsen <zamo@pcez.com> wrote:
> Hi Gary,
>
>> How does one prescale by 10 at 2 meter frequencies these days? I can
>> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?
>
> I have had good luck with the MC12080 chip from ON Semiconductor. The cost
> is about $4.00 from Newark Electronics. This is a surface mount part. The
> input frequency spec is 100 MHz to 1.1 GHz, but I have used it successfully
> at 50 MHz.

I second the MC12080D. Drive it with a sharp edge like a square
wave and it'll go even lower than 50 MHz. Great device...really
sips power (5mA Icc) unlike the ubiquitous 95H90 that would burn
your fingerprints off. Too bad Mother Batwing discontinued the
MC12080P 8 pin DIP some years back.

The differential inputs on this device, if left unterminated, will
cause the chip to oscillate at its resonant frequency. To alleviate
this, pull the inputs apart toward +Vcc and ground thru several
hundred K ohms resistance.

Don K6LTS
donrm@soco.agilent.com

212. Re: old cellphone reuse/salvage and schematics/tech info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 22:42:49 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <zLidnZKJQqHtIlOjXTWc3A@ctc.net>
Source record: 38715
Cross-posted to: alt.cellular.tech,alt.cellular,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

```
"> >> their LO's and
> > > transmitter spectral output has to be squeaky clean
>
> Yeah, in a pig's eye....
>
> Think of avionics:
> it's FORBIDDEN to use cellphones on planes, although the avionics
> should be immune from out-of band signals.
>
Celphones on planes access too many cells at one time messing up the
cellphone system. Also it is not the effect on the planes radio gear but
some of the planes are fly by wire now and the extra RF can cause them to
do strange things. A pilot friend of mine was telling about how one of the
newer jets would make a slight 'shudder movement' when it was swept by a
near by radar. It would not be noticed by the passengers but the pilots
could tell.
```

213. Re: Adding models to PSPICE GUI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 23:14:28 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <lg0s1vs3f9o8j5p7a5gr8n2jfe013skdvm@4ax.com>
Source record: 38713
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.cad,sci.electronics.design

```
On Thu, 09 Jan 2003 22:30:47 +0000,
Simon <st599@ecs.soton.ac.uk>,
In Newsgroup: sci.electronics.cad,
Article: <4vtr1vk7gilrcqbqujggsre8q4jcga8i1h@4ax.com>,
Entitled: "Re: Adding models to PSPICE GUI",
Wrote the following:

|On Thu, 09 Jan 2003 22:01:28 GMT, Jim Thompson
|<Jim-T@analog_innovations.com> wrote:
|
|>On Thu, 09 Jan 2003 21:52:16 +0000,
|>Simon <st599@ecs.soton.ac.uk>,
|>In Newsgroup: sci.electronics.cad,
|>Article: <6frr1vgsq7gjv25i9dimumi602s90ni4qu@4ax.com>,
|>Entitled: "Re: Adding models to PSPICE GUI",
|>Wrote the following:
|>
|>|On Thu, 09 Jan 2003 20:27:04 GMT, Jim Thompson
|>|<Jim-T@analog_innovations.com> wrote:
|>|
|>|>On 8 Jan 2003 11:50:04 -0800,
|>|>jason_hsu@my-deja.com (Jason Hsu),
|>|>In Newsgroup: sci.electronics.cad,
|>|>Article: <f7d9a152.0301081150.2f2080d5@posting.google.com>,
|>|>Entitled: "Adding models to PSPICE GUI",
|>|>Wrote the following:
|>|>
|>|>|I have the PSPICE student version, and I am beginning to use the GUI
|>|>|(instead of the netlist) for the first time.
|>|>|
|>|>|Does anyone here know how to add models to the PSPICE GUI? I am
|>|>|trying to add the D1N34A, and I am new to the PSPICE GUI interface.
|>|>|When I was using the text netlist instead of the GUI, I simply used
|>|>|the model command in the file.
|>|>|
|>|>|Jason Hsu, AG4DG
|>|>|usenet@@@jasonhsu.com
|>|>
|>|>Use the LIB part, fill in the blank for the Drive/Path/Libraryname.lib
|>|>
|>|>I assume LIB is available in the student version?? Charlie?
|>|>
|>|> ...Jim Thompson
```

```
|>|
|>|
|>|save your model as a .mod file
|>|
|>|open a new project, selecting analogue or mixed A/D
|>|
|>|File ... new ... PSPICE Library
|>|
|>|model ... import ... then open your model.
|>|
|>|tools ... options ... tick "always create part when saving model"
|>|
|>|save the model.
|>|
|>|To place part, open dialogue as normal and import your custom library.
|>|then place away.
|>|
|>|node names will be as listed in your model
|>|
|>|
|>|Simon
|>|
|>
|>That's for Capture, gag me with a spoon :-(
|>
|>Real PSpice users not only eat quiche but they use PSpice Schematics.
|>
|> ...Jim Thompson
|
|
|My version of PSPICE student doesn't have PSPICE Schematics, only
|Capture.

Choose custom installation, Schematics is in there.

|
|I prefer HSPICE anyway.
|
|Simon

Really? You're the first person I've ever met who liked HSpice better
than PSpice... you've probably never really used PSpice for any length
of time.

...Jim Thompson
--
| James E.Thompson, P.E. | mens |
| Analog Innovations, Inc. | et |
| Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
| Phoenix, Arizona Voice:(480)460-2350 | |
| Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
```

| http://www.analog-innovations.com | 1962 |

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

214. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-09 23:32:59 UTC
From: Jeff Verive <jeff.verive@tellabs.com>
Message-ID: <LEnT9.90$hU1.77460@news.uswest.net>
Source record: 38714
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"John Jardine" <john@jjdesigns.fsnet.co.uk> wrote in message
news:avko7btag1@news5.svr.pol.co.uk...
> This stuff is the magical part of analogue design and to get a decent H.F.
> response you need to try a number of tricks/techniques. The easiest is to
> keep the gain low and design the collector resistance to be as low as
> possible. Keep the source impedance as low as possible. Use 'R.F'
> transistors with high Ft's and low collector-base capacitances. Keep the
> collector strays and loading capacitances as low as possible.

Hey, don't give away the secrets of those of us who stayed awake and really worked out those multi-stage transistor amplifier designs by hand!

Just kidding, although there seems to be quite a chasm between "digital" and "analog" engineers. Luckily, as circuits get faster and faster, even the digital guys (and gals) have to stay awake in those boring analog courses.

The bottom line: for circuits operating above 10kHz or so, ALWAYS consider parasitics, since they invariably add more poles (and an occasional hole) than the schematic shows.

Jeff

215. Re: Bird 43 Elements Outside Their Range

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 00:42:23 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <avl4tp$g82ka$1@ID-49117.news.dfncis.de>
Source record: 38716

"Al Lorona" <al_lorona@agilent.com> wrote in message
news:3E1B4D53.AC3B63C8@agilent.com...
>
> Has anybody ever swept a Bird 43 element outside its rated frequency
> range to see how quickly it drops off on either side?
>
> I seem to remember casually measuring I think a 25 - 60 MHz element once
> and seeing that it was no more than 1 or 2 dB down at 3.5 MHz.
>
> I've already checked the source: Bird Electronics does not publish
> frequency response curves of their elements on their web site.
>
>
> Thanks,
>
> Al W6LX

The Bird 43 instruction manual has a freq response graph for the 100 to 250 mhz 10, 100 and 1,000 watt slugs only but says that the curves are typical for all slugs (A,B,C,D and E) at their respective stated frequencies. Accordingly, extrapolation can be assumed which is useful when measuring harmonic signals outside the specified frequency range of the slug.

The low power slug (10 W) is down 1 dB at 74 and 380 mhz. and 3 db down at 48 and 560 mhz.

The medium power slug (100 W) is down 1 db at 38 and 460 mhz and 3 db down at 20 and 800 mhz.

The high power slug (1,000 W) is 1 db down at 20 and 1,000 mhz. There is no 3 db info.

AL

216. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 02:00:12 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <avl8lb$6pu$1@news5.svr.pol.co.uk>
Source record: 38717
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jeff Verive <jeff.verive@tellabs.com> wrote in message
news:LEnT9.90$hU1.77460@news.uswest.net...
>
> "John Jardine" <john@jjdesigns.fsnet.co.uk> wrote in message
> news:avko7btag1@news5.svr.pol.co.uk...
> > This stuff is the magical part of analogue design and to get a decent
H.F.
> > response you need to try a number of tricks/techniques. The easiest is
to
> > keep the gain low and design the collector resistance to be as low as
> > possible. Keep the source impedance as low as possible. Use 'R.F'
> > transistors with high Ft's and low collector-base capacitances. Keep the
> > collector strays and loading capacitances as low as possible.
>
> Hey, don't give away the secrets of those of us who stayed awake and
really
> worked out those multi-stage transistor amplifier designs by hand!
>
> Just kidding, although there seems to be quite a chasm between "digital"
and
> "analog" engineers. Luckily, as circuits get faster and faster, even the
> digital guys (and gals) have to stay awake in those boring analog courses.
>
> The bottom line: for circuits operating above 10kHz or so, ALWAYS consider
> parasitics, since they invariably add more poles (and an occasional hole)
> than the schematic shows.
>
> Jeff
>
>
I don't mind bumping into the poles, as I can spot 'em beforehand. It's
those damned hidden holes I keep falling in!.
regards
john

217. EXAR 2228

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 02:06:20 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E1E272C.31F9D9CD@verizon.net>
Source record: 38718

Anyone know of a source for this out of mfg analog multiplier IC?

Tnx,

Dale W4OP

218. Re: building hf dds rig help..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 02:51:56 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E1E35BE.A0250212@cox.net>
Source record: 38719

Analog Devices just announced the 9951, which clocks at over 300 MHz and
uses only 1/10 the power of their previous device (9854?). Requires 200
mW of power.

It is a 14 bit device, but I still think you need something to clean it
up for receiver use.

- Dan, N7VE

Bill Kirkland wrote:
>
> Check out Elecraft, http://www.elecraft.com/,
> the K2 has most of what you are looking for except I believe the AM/FM
> capability.
>
> Also try http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
> which I believe is in RSGB.
>
> If you are doing it yourself, how difficult it is depends a fair bit on the
> performance you want.
> ADI is making a DDS that clocks at 300 MHz and I believe they have one a 1 GHz
> now
> - a little power hungry for "mobile"
>
> QST Dec, 1981 has "A Modern Upconverting General-Coverage Receiver"
> has AM & SSB.
>
> Bill
> VE3JHU
>
> zindazenda wrote:
>
> > more info.....
> > also has to be able to band switch and have AM and FM capability also....LCD
> >
> > will check out "hands" tnx
> > "zindazenda" <zen@lineisp.co.uk> wrote in message
> > news:1041447552.778877@auth2.dns.griffin.net.uk...
> > > First of all Happy New Year.
> > >
> > >
> > > looking to build an hf dds (mobile rig) all band (preferably general
> > > coverage.) so.................
> > > does anyone have construction details of such a project ie. magazine/web
> > > projects.I have found a fair bit on the web, but am wondering if a kit is

> > > available for the dds (to save time) and of peoples experiences of such a
> > > project.
> > > tnx G0ZEN
> > >
> > >
> > >
> > >

219. Re: Icom 70cm IC-U16 programing

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 03:03:55 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <0rds1voljf5b77hgbtf2m5np22uq3bkf7a@4ax.com>
Source record: 38720

On Wed, 8 Jan 2003 09:42:46 +0200, "Louis van Heerden"
<zs1lvh@absamail.co.za> wrote:

>I have a pair of Icon IC-U16 70cm handhelds.Both are programmed with the
>same frequecies (I know about Func/159357 etc) On one the numbers of the
>programmed frequencies appear when I press scan and it does a normal scan
>the other is the problem as it will not scan, if I hold down the up or down
>arrows it will scan as long as I hold the key down but will not scan by its
>self. It is not in priority scan mode. Please can anyone tell me how to get
>the scan to opperate.
>73 Louis ZS1LVH
>zs1lvh@absamail.co.za
>
>
You have to enter each channel into the scan list then it will scan.
Look for SCH on the number pad label. Choose the channel you want to
scan, you will need more than one, and while pressing Function, press
SCH to add that channel to the scan list.

As you press the Function / SCH you will see little channel numbers
appear across the top of the radio. This is the indication the channel
is included in the scan list. Just press Function/SCH until the
channel you have on the display appear in that list across the top of
the display.

Gary K8IZ

220. training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 04:10:06 UTC
From: rgsnews@gapable.com
Message-ID: <8aa96b4.0301092010.71eea027@posting.google.com>
Source record: 38721

hey all,
I'm somewhat knowledgeable about electronics but know nothing about circuitry... I know a little about RF but not much... I would like to become comfortable enough so I can take apart old radios and change their frequencies, generally make new stuff out of old parts, etc... Any suggestions on books that would help me learn the basics of how receivers/transmitters and transceivers are built, general theory, etc?

thanks!

221. Re: EXAR 2228

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 04:27:02 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <avli2m$8gg$1@freenet9.carleton.ca>
Source record: 38722

Dale Parfitt (parinc@verizon.net) writes:
> Anyone know of a source for this out of mfg analog multiplier IC?
>
> Tnx,
>
> Dale W4OP
>
I have no idea; I can't even remember noticing it before, though
I knew about the Exar 2208 that started out as the Intersil 2208.

Take note that it's essence is nothing more than a "Gilbert Cell"
mixer, so common in ICs when a double-balanced mixer is called for.
If you aren't repairing something (or even if you are, by making
some changes), there are plenty of such mixers that would do
basically the same thing, the MC1496, the NE602, the Exar 2208,
all kinds of ICs that use the scheme in their FM detectors and
mixers, and even the MC1350. Of course, that isn't dealing with
levels and other specs, or even exactly what you can control
from outside; I'm just saying the basic mixer is available in all
kinds of ICs.

The most obvious difference about the 2208 and the 2228 is
that it includes an op-amp stage within the package, but unconnected
to the multiplier. The former also has a buffer stage on the output
of the multiplier. Since the 2208 seems to have been more
visible, perhaps it can be found even now.

You might want to be specific about what you need it for.

Michael VE2BVW

222. Re: training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 04:55:21 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <ZmsT9.18996$oS1.78526@news-server.bigpond.net.au>
Source record: 38723

Graham wrote:
> hey all,
> I'm somewhat knowledgeable about electronics but know nothing about
> circuitry... I know a little about RF but not much... I would like
to
> become comfortable enough so I can take apart old radios and change
> their frequencies, generally make new stuff out of old parts, etc...
> Any suggestions on books that would help me learn the basics of how
> receivers/transmitters and transceivers are built, general theory,
> etc?
>
> thanks!

ARRL Handbook, published by ARRL, USA will cover the basics you need.

Steve

223. Re: building hf dds rig help../AD9951 - AD9954

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 05:04:03 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E1E5443.1590F3B8@sympatico.ca>
Source record: 38724

Press release is at
http://www.analog.com/Analog_Root/sitePage/mainSectionContent/0,2132,level4%253D%25252D1%2526ContentID%253D17650%2526level1%253D292%2526level2%253D%25252D1%2526level3%253D%25252D1,00.html

There are a group of devices, AD9951 - AD9954
They run on 1.8 V with 400 MHz clock yielding upto 160 MHz output signal
40% of Fclk - which is a typical number to ease filter aliasing requirements

Bill
VE3JHU

Dan Tayloe wrote:

> Analog Devices just announced the 9951, which clocks at over 300 MHz and
> uses only 1/10 the power of their previous device (9854?). Requires 200
> mW of power.
>
> It is a 14 bit device, but I still think you need something to clean it
> up for receiver use.
>
> - Dan, N7VE
>
> Bill Kirkland wrote:
> >
> > Check out Elecraft, http://www.elecraft.com/,
> > the K2 has most of what you are looking for except I believe the AM/FM
> > capability.
> >
> > Also try http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
> > which I believe is in RSGB.
> >
> > If you are doing it yourself, how difficult it is depends a fair bit on the
> > performance you want.
> > ADI is making a DDS that clocks at 300 MHz and I believe they have one a 1 GHz
> > now
> > - a little power hungry for "mobile"
> >
> > QST Dec, 1981 has "A Modern Upconverting General-Coverage Receiver"
> > has AM & SSB.
> >
> > Bill
> > VE3JHU
> >
> > zindazenda wrote:

> >
> > > more info.....
> > > also has to be able to band switch and have AM and FM capability also....LCD
> > >
> > > will check out "hands" tnx
> > > "zindazenda" <zen@lineisp.co.uk> wrote in message
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> > > > First of all Happy New Year.
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> > > >
> > > > looking to build an hf dds (mobile rig) all band (preferably general
> > > > coverage.) so.....
> > > > does anyone have construction details of such a project ie. magazine/web
> > > > projects.I have found a fair bit on the web, but am wondering if a kit is
> > > > available for the dds (to save time) and of peoples experiences of such a
> > > > project.
> > > > tnx G0ZEN
> > > >
> > > >
> > > >
> > > >

224. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 05:44:46 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E1E5DCE.24471B06@mfi.net>
Source record: 38725
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
Jim Thompson wrote:
>
> On Thu, 09 Jan 2003 12:10:40 -0500,
> "Michael A. Terrell" <terrell@mfi.net>,
> In Newsgroup: sci.electronics.design,
> Article: <3E1DAD10.59E20953@mfi.net>,
> Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
> Wrote the following:
>
> |Jim Thompson wrote:
> |>
> [snip]
> |> |John Woodgate <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:<DTFli2AcIBH+Ewpj@jmwa.demon.co.uk>...
> |> |...
> |> |>
> |> |> The source for arcane lore on vacuum tubes is 'Radio(tron)* Designer's
> |> |> Handbook, F Langford Smith. The 1998 reprinted edition is ISBN 0 7506
> |> |> 3635 1.
> |> |>
> |> |> * (tron) was included for the original Australian and the US editions.
> |> |>
> [snip]
> |> My copy, "Radiotron", is Fourth Edition, 1952 ;-)
> |>
> |> ...Jim Thompson
> |
> | So is mine. I knew an old man who sold used books at a flea market,
> |and when he found that I was interested in the older electronics books
> |he would put aside anything he found till I got a look at them. I
> |bought quite a few from him, but he died of cancer a few years ago, and
> |I haven't seen another good deal, other than Skolnik's RADAR book.
>
> I bought mine *new* ;-)
>
> ...Jim Thompson
> --
> | James E.Thompson, P.E. | mens |
> | Analog Innovations, Inc. | et |
> | Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
> | Phoenix, Arizona Voice:(480)460-2350 | |
> | Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
> | http://www.analog-innovations.com | 1962 |
```

>
> For proper E-mail replies SWAP "-" and "_"
>
> I love to cook with wine. Sometimes I even put it in the food.

Yes, but "I" was new in '52 :)
--

Michael A. Terrell
Central Florida

225. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 06:10:11 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E1E63C3.4BEE719D@mfi.net>
Source record: 38726
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
John Jardine wrote:
>
> Jeff Verive <jeff.verive@tellabs.com> wrote in message
> news:LEnT9.90$hU1.77460@news.uswest.net...
> >
> > "John Jardine" <john@jjdesigns.fsnet.co.uk> wrote in message
> > news:avko7b$tag$1@news5.svr.pol.co.uk...
> > > This stuff is the magical part of analogue design and to get a decent
> H.F.
> > > response you need to try a number of tricks/techniques. The easiest is
> to
> > > keep the gain low and design the collector resistance to be as low as
> > > possible. Keep the source impedance as low as possible. Use 'R.F'
> > > transistors with high Ft's and low collector-base capacitances. Keep the
> > > collector strays and loading capacitances as low as possible.
> >
> > Hey, don't give away the secrets of those of us who stayed awake and
> really
> > worked out those multi-stage transistor amplifier designs by hand!
> >
> > Just kidding, although there seems to be quite a chasm between "digital"
> and
> > "analog" engineers. Luckily, as circuits get faster and faster, even the
> > digital guys (and gals) have to stay awake in those boring analog courses.
> >
> > The bottom line: for circuits operating above 10kHz or so, ALWAYS consider
> > parasitics, since they invariably add more poles (and an occasional hole)
> > than the schematic shows.
> >
> > Jeff
> >
> >
> I don't mind bumping into the poles, as I can spot 'em beforehand. It's
> those damned hidden holes I keep falling in!.
> regards
> john

"CAUTION! Watch out for moving holes!" :)
--

Michael A. Terrell
Central Florida
```

226. Re: training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 08:00:38 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e1e7d5d@news.alphalink.com.au>
Source record: 38727

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:ZmsT9.18996$oS1.78526@news-

> ARRL Handbook, published by ARRL, USA will cover the basics you need.

Also http://www.radiofun.cjb.net

Peter VK3YE

227. Re: Getting hiss along with strong CW signals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 08:26:18 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <UxvT9.9502$Rc7.180906@news2.e.nsc.no>
Source record: 38729

Do you have any AGC in your rx? Could it be overload?

Sverre
LA3ZA
www.qsl.net/la3za

"Bill Harbour" <w.harbourjr@worldnet.att.net> wrote in message
news:deafe3d9.0301091236.5b3fc48d@posting.google.com...
> I'm getting a hiss that accompanies very strong CW signals out of my
> HB 20m single conversion superhet receiver. There is no hiss on the
> quieter CW notes.

228. Re: EXAR 2228

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 09:03:48 UTC
From: hrbcrb@aol.com.goaway
Message-ID: <20030110040348.02372.00000331@mb-mb.aol.com>
Source record: 38643

I crossed several EXAR parts to NTE a few years back, worked fine. They have a cross reference on their web site http://www.nteinc.com.

Good luck, Hugh KF6HHS
Retired, now life moves at my pace.
please note spam filter

229. Re: Motorola Frequency Synthesis ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 11:39:50 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <avmh80$lp3$1@news5.svr.pol.co.uk>
Source record: 38730
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3E1E194C.F6BEB883@alma.demon.co.uk...
> Does anyone know a source in the UK, or a source in the US who is
> prepared to ship to the UK, any of the Motorola frequency synthesis ICs
> of the types:-

Some NS PLL chips are available from Farnell. They are all surface-mount, so harder to use. They go up to 500 MHz or so. They are worth considering in place of the Mot. ones.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

230. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 13:34:14 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <dfit1v4q7mqm1mkk07umb7rd7iahnim9in@4ax.com>
Source record: 38731
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
<john@jjdesigns.fsnet.co.uk> opined thusly:

>That 200kHz will be due to, too high a gain, capacitive loading effects,
>high source resistance...
[comprehensive discourse snipped]

Well, you've obviously amassed a formidable expertise in RF circuit
behavior judging by that posting! I'm grateful for the tips from you
and others who've contributed here. One point arises, however: is the
chief determining parameter of the maximum frequency a transistor can
handle its base/collector capacitance (both intrinsic and external)?
I mean, could one get a good idea of how fast an RF tranny is just by
the manufacturer's figure for intrinsic b/c capacitance? I'm assuming
such a figure is also a SPICE parameter?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

231. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 16:12:46 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <c4st1v8nsdku08pckith5qgdhvjrenj11i@4ax.com>
Source record: 38733
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
On Fri, 10 Jan 2003 00:44:46 -0500,
"Michael A. Terrell" <terrell@mfi.net>,
In Newsgroup: sci.electronics.design,
Article: <3E1E5DCE.24471B06@mfi.net>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|Jim Thompson wrote:
|>
|> On Thu, 09 Jan 2003 12:10:40 -0500,
|> "Michael A. Terrell" <terrell@mfi.net>,
|> In Newsgroup: sci.electronics.design,
|> Article: <3E1DAD10.59E20953@mfi.net>,
|> Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
|> Wrote the following:
|>
|> |Jim Thompson wrote:
[snip]
|> |> My copy, "Radiotron", is Fourth Edition, 1952 ;-)
|> |>
|> |> ...Jim Thompson
|> |
|> | So is mine. I knew an old man who sold used books at a flea market,
|> |and when he found that I was interested in the older electronics books
|> |he would put aside anything he found till I got a look at them. I
|> |bought quite a few from him, but he died of cancer a few years ago, and
|> |I haven't seen another good deal, other than Skolnik's RADAR book.
|>
|> I bought mine *new* ;-)
|>
|> ...Jim Thompson
[snip]
|
| Yes, but "I" was new in '52 :)

IIRC I bought my copy in 1954 or 1955 at the age of 14 or 15, about
when I built my first Williamson (I think that's what the tube amp
with screen taps from the output transformer was called ??).

...Jim Thompson
--
| James E.Thompson, P.E. | mens |
| Analog Innovations, Inc. | et |
| Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
```

Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

232. Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 16:14:23 UTC
From: Al Gerbens <agerbens@msn.com>
Message-ID: <OQjo9LMuCHA.1444@cpimsnntpa03>
Source record: 38732

Any ideas on how to make small rectangular holes , say for slide switches,
in plastic enclosures?

233. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 16:39:10 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3E1EF72E.DE3392E6@pt.uu.net>
Source record: 38734

Hello,

Mark the outside limits with an pen.
With an drill make an hole smaller than the outside limits
With an rasp remove the plastic till the marks.
Finish with sandpaper.

This worked for me although in aluminum.

73 de CT2GQV

Al Gerbens wrote:
>
> Any ideas on how to make small rectangular holes , say for slide switches,
> in plastic enclosures?

--
Ricardo Martins

234. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 17:21:50 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1888a1055cea5f0c9896c4@192.168.42.131>
Source record: 38735

In article <OQjo9LMuCHA.1444@cpimsnntpa03>, agerbens@msn.com says...

> Any ideas on how to make small rectangular holes , say for slide switches,
> in plastic enclosures?

Mmm... Hot knife? A heated Xacto blade, to be specific.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

235. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 17:51:03 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E1F0806.F2D58E29@northwest.com>
Source record: 38736

Drill a small (3/16") hole in the center of where the rectangular opening goes.

then, use (purchase) a hand nibbler tool. They are indispensible!

==========

Bruce Lane wrote:

> In article <OQjo9LMuCHA.1444@cpimsnntpa03>, agerbens@msn.com says...
>
> > Any ideas on how to make small rectangular holes , say for slide switches,
> > in plastic enclosures?
>
> Mmm... Hot knife? A heated Xacto blade, to be specific.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

236. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 19:05:21 UTC
From: Idontwantspam@net
Message-ID: <3e1f18dd.29729979@news.bellatlantic.net>
Source record: 38737

On Fri, 10 Jan 2003 09:51:03 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>Drill a small (3/16") hole in the center of where the rectangular opening goes.
>
>then, use (purchase) a hand nibbler tool. They are indispensible!
>
>===========
>
>Bruce Lane wrote:
>
>> In article <OQjo9LMuCHA.1444@cpimsnntpa03>, agerbens@msn.com says...
>>
>> > Any ideas on how to make small rectangular holes , say for slide switches,
>> > in plastic enclosures?
>>
>> Mmm... Hot knife? A heated Xacto blade, to be specific.
>>
A hot knife tends to leave a raised ridge around the opening, which
may then need to be removed.

A drill and a nibbler tool will be faster, neater, and you'll be ready
for aluminum enclosures later.

A decent nibbler tool will be $15-20.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

237. Johnson Fleetcom II UHF help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 19:23:02 UTC
From: Brent <Brent@criers.org>
Message-ID: <q4FT9.21093$Gm2.241020@twister.rdc-kc.rr.com>
Source record: 38739
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have a Johnson Fleetcom II UHF mobile I believe it is set up for 448.750 I want to move it to different repeater which is 443.975 can anyone tell me what crystals I will need to order and where I should order them from? Any help is greatly appreciated.

Thanks,
Brent N9BC
email: brent AT criers.org

For the spam crawlers
root@127.0.0.1

238. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 19:30:21 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <avn669$m3k$1@newsg1.svr.pol.co.uk>
Source record: 38738
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote in message
news:dfit1v4q7mqm1mkk07umb7rd7iahnim9in@4ax.com...
> On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
> <john@jjdesigns.fsnet.co.uk> opined thusly:
>
> >That 200kHz will be due to, too high a gain, capacitive loading effects,
> >high source resistance...
> [comprehensive discourse snipped]
>
> Well, you've obviously amassed a formidable expertise in RF circuit
> behavior judging by that posting! I'm grateful for the tips from you
> and others who've contributed here. One point arises, however: is the
> chief determining parameter of the maximum frequency a transistor can
> handle its base/collector capacitance (both intrinsic and external)?
> I mean, could one get a good idea of how fast an RF tranny is just by
> the manufacturer's figure for intrinsic b/c capacitance? I'm assuming
> such a figure is also a SPICE parameter?
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

To be honest, I've only casual knowledge in this interesting area of circuit design!. I've noticed though, a couple of this group's posters are -real- RF men and should have some good angles. As Jeff V mentioned, fluency with it comes from actually doing it and as is usually the case, the best learning come from figuring out why the stuff won't play ball.
To a first guess the Ccb value is a very good pointer to a fast transistor but it is one of a host of other internal transistor factors that are waiting in the wings and ready to pounce. All the factors come into play at some point as the frequency moves upwards.
For HF use it's usually best in the first instance, to select a transistor from the lists specifically marked as 'RF' transistors. This ensures that most of the major, internal limiting factors, (particularly internal capacitances), will have been characterised and optimised to allow more predictable operation at the higher frequencies.
Yes, the Ccb is an essential spice model value.
regards
john

Incidentally ... What was your rough gain and source impedance?.

239. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 20:29:53 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E1F2D41.6F87F493@mfi.net>
Source record: 38740
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
Jim Thompson wrote:
>
> On Fri, 10 Jan 2003 00:44:46 -0500,
> "Michael A. Terrell" <terrell@mfi.net>,
> In Newsgroup: sci.electronics.design,
> Article: <3E1E5DCE.24471B06@mfi.net>,
> Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
> Wrote the following:
>
> |Jim Thompson wrote:
> |>
> |> On Thu, 09 Jan 2003 12:10:40 -0500,
> |> "Michael A. Terrell" <terrell@mfi.net>,
> |> In Newsgroup: sci.electronics.design,
> |> Article: <3E1DAD10.59E20953@mfi.net>,
> |> Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
> |> Wrote the following:
> |>
> |> |Jim Thompson wrote:
> [snip]
> |> |> My copy, "Radiotron", is Fourth Edition, 1952 ;-)
> |> |>
> |> |> ...Jim Thompson
> |> |
> |> | So is mine. I knew an old man who sold used books at a flea market,
> |> |and when he found that I was interested in the older electronics books
> |> |he would put aside anything he found till I got a look at them. I
> |> |bought quite a few from him, but he died of cancer a few years ago, and
> |> |I haven't seen another good deal, other than Skolnik's RADAR book.
> |>
> |> I bought mine *new* ;-)
> |>
> |> ...Jim Thompson
> [snip]
> |
> | Yes, but "I" was new in '52 :)
>
> IIRC I bought my copy in 1954 or 1955 at the age of 14 or 15, about
> when I built my first Williamson (I think that's what the tube amp
> with screen taps from the output transformer was called ??).
>
> ...Jim Thompson
> --
```

> | James E.Thompson, P.E. | mens |
> | Analog Innovations, Inc. | et |
> | Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
> | Phoenix, Arizona Voice:(480)460-2350 | |
> | Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
> | http://www.analog-innovations.com | 1962 |
>
> For proper E-mail replies SWAP "-" and "_"
>
> I love to cook with wine. Sometimes I even put it in the food.

The Williamson ultralinear? It has been too many years for me too.
:)
--

Michael A. Terrell
Central Florida

240. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 20:40:06 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <7ALbGNAm+yH+Ewfi@jmwa.demon.co.uk>
Source record: 38656
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Jim Thompson <Jim-
T@analog_innovations.com> wrote (in <c4st1v8nsdku08pckith5qgdhvjrenj11i@
4ax.com>) about 'NEED ADVICE: Vacuum tube grid current?', on Fri, 10 Jan
2003:
>IIRC I bought my copy in 1954 or 1955 at the age of 14 or 15, about
>when I built my first Williamson (I think that's what the tube amp
>with screen taps from the output transformer was called ??).

No, the Williamson was earlier and used KT66 pentodes connected as
triodes. Your amp, using the 'ultra-linear' screen feedback trick,
might have been the Mullard 5/20, the GEC 912 or the GEC 88-50, if it
was a British home-constructor design.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

241. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 20:44:24 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <Ah4F+RAoCzH+EwLC@jmwa.demon.co.uk>
Source record: 38657
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <dfit1v4q7mqm1mkk07umb7rd7iahnim
9in@4ax.com>) about 'Limitations of the BC337', on Fri, 10 Jan 2003:
>On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
><john@jjdesigns.fsnet.co.uk> opined thusly:
>
>>That 200kHz will be due to, too high a gain, capacitive loading effects,
>>high source resistance...
>[comprehensive discourse snipped]
>
>Well, you've obviously amassed a formidable expertise in RF circuit
>behavior judging by that posting! I'm grateful for the tips from you
>and others who've contributed here. One point arises, however: is the
>chief determining parameter of the maximum frequency a transistor can
>handle its base/collector capacitance (both intrinsic and external)?
>I mean, could one get a good idea of how fast an RF tranny is just by
>the manufacturer's figure for intrinsic b/c capacitance? I'm assuming
>such a figure is also a SPICE parameter?

A lot of the stuff you've been told is more applicable to operation at
20 MHz than 200 kHz. I still say that if you want the correct solution,
you should give more information, preferably a schematic.

Ccb of a small-signal silicon bipolar is NOT a factor at 200 kHz. Unless
you have a 1 Mohm source, of course, and/or a voltage gain of 100.
That's why we need more data.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

242. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 20:45:25 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <Ax7FKVAlDzH+Ewqf@jmwa.demon.co.uk>
Source record: 38658
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that John Jardine
<john@jjdesigns.fsnet.co.uk> wrote (in <avn669$m3k$1@newsg1.svr.pol.co.u
k>) about 'Limitations of the BC337', on Fri, 10 Jan 2003:
>Yes, the Ccb is an essential spice model value.

At 200 kHz???
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

243. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 21:26:02 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E1F3A6A.2E18@sneakemail.com>
Source record: 38741
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

Michael A. Terrell wrote:
>
> Jim Thompson wrote:

[...]

> > IIRC I bought my copy in 1954 or 1955 at the age of 14 or 15, about
> > when I built my first Williamson (I think that's what the tube amp
> > with screen taps from the output transformer was called ??).
> >
> > ...Jim Thompson

[...]

> The Williamson ultralinear? It has been too many years for me too.
> :)
> Michael A. Terrell
> Central Florida

Thanks for the memories. From 6V6 to 6L6, then KT66, KT88, 6146, then the ultimate - 813:)

I really miss the warm glow of filaments on a cold winter's eve, and the clear signals on 40 meters when ice was on the windows:)

Mike

244. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 21:50:26 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1888dff85e6e23769896c6@192.168.42.131>
Source record: 38742

In article <3e1f18dd.29729979@news.bellatlantic.net>, Idontwantspam@net says...

<snippety-blop>

> A hot knife tends to leave a raised ridge around the opening, which
> may then need to be removed.

Not necessarily. Meisei Corporation makes an adjustable-temperature hot knife that most often finds use in wire-stripping operations. If you set the temperature right, it'll be just enough to go through the plastic cleanly, and not melt the sides thus creating a ridge.

> A drill and a nibbler tool will be faster, neater, and you'll be ready
> for aluminum enclosures later.

No argument there. I just didn't happen to think of a nibbler when I saw the original post.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

245. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 21:55:45 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <m4gu1vknunms09a860upgfv1troivho6o2@4ax.com>
Source record: 38743
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 16:26:02 -0500,
Mike Monett <z06hgto001@sneakemail.com>,
In Newsgroup: sci.electronics.design,
Article: <3E1F3A6A.2E18@sneakemail.com>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|Michael A. Terrell wrote:
|>
|> Jim Thompson wrote:
|
|[...]
|
|> > IIRC I bought my copy in 1954 or 1955 at the age of 14 or 15, about
|> > when I built my first Williamson (I think that's what the tube amp
|> > with screen taps from the output transformer was called ??).
|> >
|> > ...Jim Thompson
|
|[...]
|
|> The Williamson ultralinear? It has been too many years for me too.
|> :)
|> Michael A. Terrell
|> Central Florida
|
|Thanks for the memories. From 6V6 to 6L6, then KT66, KT88, 6146, then the
|ultimate - 813:)
|
|I really miss the warm glow of filaments on a cold winter's eve, and the
|clear signals on 40 meters when ice was on the windows:)
|
|Mike

I stopped at KT88 and switched to silicon. Prior to that I had built
a 10W class-A amp using one of those door-knob Ge devices from Delco.

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat

| http://www.analog-innovations.com | 1962 |

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

246. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 22:12:19 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E1F4543.4C50@sneakemail.com>
Source record: 38744
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote:

[...]

> I stopped at KT88 and switched to silicon. Prior to that I had built
> a 10W class-A amp using one of those door-knob Ge devices from Delco.
>
> ...Jim Thompson

I remember those - a real pain to mount on a 1/8" aluminum heat sink. One hole for the mounting stud, then three for the leads. My holes usually got too big after moving them over to fit the pins:)

Mike

247. FS: LCD 16 x 4 displays, $6 each. NEW! MUST SELL!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 22:41:29 UTC
From: ovrreactor@aol.com
Message-ID: <20030110174129.02142.00000115@mb-df.aol.com>
Source record: 38646

I am selling BRAND NEW LCD display modules, made by Data Vision, model number DV-16400 (reflective, no backlight). Asking $6 each (please order in increments of 6). I have 85 of these on hand.

NOTE: This model is still in production, so manufacturers can design this part in, and be confident that additional stock can be purchased through distribution later.

Picture, detailed PDF documentation, and manufacturer website link is available at;
http://members.aol.com/ecc81/yardsale

If you need larger quantities, I might have a few hundred more buried in my storage unit. Let me know if you need more than 85, and I'll dig around for them.

Please respond BY EMAIL (do NOT post) to < OvrReactor@aol.com > if interested.

Thanks,
Tom Mitchell
website - http://members.aol.com/ecc81

248. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 22:52:01 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <7uiu1v8mkics6t3agu6ma6ot7at2u2hn4a@4ax.com>
Source record: 38746
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 17:12:19 -0500,
Mike Monett <z06hgto001@sneakemail.com>,
In Newsgroup: sci.electronics.design,
Article: <3E1F4543.4C50@sneakemail.com>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|Jim Thompson wrote:
|
|[...]
|
|> I stopped at KT88 and switched to silicon. Prior to that I had built
|> a 10W class-A amp using one of those door-knob Ge devices from Delco.
|>
|> ...Jim Thompson
|
|I remember those - a real pain to mount on a 1/8" aluminum heat sink. One
|hole for the mounting stud, then three for the leads. My holes usually
|got too big after moving them over to fit the pins:)
|
|Mike

I was lucky. My father-in-law-to-be ran a machine shop. He machined
me the most beautiful heat sink you've ever seen ;-)

He also planed the head on my '53 Hudson Jet after I warped it by
over-heating the engine and blowing the head gasket. Made it pretty
speedy... I could get 100MPH out of it ;-)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

249. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 22:52:13 UTC
From: Jeff Verive <jeff.verive@tellabs.com>
Message-ID: <y8IT9.2586$337.123561@news.uswest.net>
Source record: 38745
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

What's the application, common emitter, common base, common collector, class C, class D, class S, etc? Depending on application, Ccb may be most important, hoe may be a factor, etc. In most cases, the most important factors may be experimentally determined by playing with the parameters in SPICE, but that's just one possible starting point.

More info is needed.

Jeff

"John Jardine" <john@jjdesigns.fsnet.co.uk> wrote in message news:avn669$m3k$1@newsg1.svr.pol.co.uk...
>
> Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote in message
> news:dfit1v4q7mqm1mkk07umb7rd7iahnim9in@4ax.com...
> > On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
> > <john@jjdesigns.fsnet.co.uk> opined thusly:
> >
> > >That 200kHz will be due to, too high a gain, capacitive loading effects,
> > >high source resistance...
> > [comprehensive discourse snipped]
> >
> > Well, you've obviously amassed a formidable expertise in RF circuit
> > behavior judging by that posting! I'm grateful for the tips from you
> > and others who've contributed here. One point arises, however: is the
> > chief determining parameter of the maximum frequency a transistor can
> > handle its base/collector capacitance (both intrinsic and external)?
> > I mean, could one get a good idea of how fast an RF tranny is just by
> > the manufacturer's figure for intrinsic b/c capacitance? I'm assuming
> > such a figure is also a SPICE parameter?
> > --
> >
> > "What is now proved was once only imagin'd"
> > - William Blake, 1793
>
> To be honest, I've only casual knowledge in this interesting area of circuit
> design!. I've noticed though, a couple of this group's posters are -real-RF
> men and should have some good angles. As Jeff V mentioned, fluency with it
> comes from actually doing it and as is usually the case, the best learning
> come from figuring out why the stuff won't play ball.
> To a first guess the Ccb value is a very good pointer to a fast transistor

> but it is one of a host of other internal transistor factors that are
> waiting in the wings and ready to pounce. All the factors come into play
at
> some point as the frequency moves upwards.
> For HF use it's usually best in the first instance, to select a transistor
> from the lists specifically marked as 'RF' transistors. This ensures that
> most of the major, internal limiting factors, (particularly internal
> capacitances), will have been characterised and optimised to allow more
> predictable operation at the higher frequencies.
> Yes, the Ccb is an essential spice model value.
> regards
> john
>
> Incidentally ... What was your rough gain and source impedance?.
>
>

250. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:00:53 UTC
From: Chuck Chunder <See.Message.Text@ToReply.com>
Message-ID: <3e1f50b4$0$27995$afc38c87@news.optusnet.com.au>
Source record: 38647

"Al Gerbens" wrote
> Any ideas on how to make small rectangular holes , say for slide switches,
> in plastic enclosures?

Commercially, I used a local signwriter who has an X-Y laser cutter.
This produces perfect holes, ANY shape, with exact clean edges
up to 5 mm material. They need a DXF Autocad file of the lines to cut.

Simple. Clean. Perfect.

The down-side ?
For small runs, they may charge a setup cost.

HTH

Chuck

251. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:09:18 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E1F529E.7222@sneakemail.com>
Source record: 38648
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote:

[...]

> I was lucky. My father-in-law-to-be ran a machine shop. He machined
> me the most beautiful heat sink you've ever seen ;-)
> He also planed the head on my '53 Hudson Jet after I warped it by
> over-heating the engine and blowing the head gasket. Made it pretty
> speedy... I could get 100MPH out of it ;-)
>
> ...Jim Thompson

I could only get about 90 or so in my Dad's '49 Ford Flathead, no matter how much I tweaked the carb screws.

I saw one recently in Fry's parking lot in Santa Clara. Could not figure out how my girlfriend and I could both fit in the back seat. Not sitting up. Well, you know what I mean:)

Mike

252. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:13:15 UTC
From: Idontwantspam@net
Message-ID: <3e1f5370.44725371@news.bellatlantic.net>
Source record: 38649

On Sat, 11 Jan 2003 09:00:53 +1000, "Chuck Chunder"
<See.Message.Text@ToReply.com> wrote:

>"Al Gerbens" wrote
>> Any ideas on how to make small rectangular holes , say for slide switches,
>> in plastic enclosures?
>
>Commercially, I used a local signwriter who has an X-Y laser cutter.
>This produces perfect holes, ANY shape, with exact clean edges
>up to 5 mm material. They need a DXF Autocad file of the lines to cut.
>
>Simple. Clean. Perfect.
>
>The down-side ?
>For small runs, they may charge a setup cost.
>
>HTH
>
>Chuck
>
>

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

253. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:15:15 UTC
From: Idontwantspam@net
Message-ID: <3e1f5382.44743077@news.bellatlantic.net>
Source record: 38650

On Sat, 11 Jan 2003 09:00:53 +1000, "Chuck Chunder"
<See.Message.Text@ToReply.com> wrote:

>"Al Gerbens" wrote
>> Any ideas on how to make small rectangular holes , say for slide switches,
>> in plastic enclosures?
>
>Commercially, I used a local signwriter who has an X-Y laser cutter.
>This produces perfect holes, ANY shape, with exact clean edges
>up to 5 mm material. They need a DXF Autocad file of the lines to cut.
>
>Simple. Clean. Perfect.
>
>The down-side ?
>For small runs, they may charge a setup cost.
>
There are always some commercial equipment that can do a great job,
flawlessly, in seconds.

But no individual without a business would ever get one of them.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

254. Re: EXAR 2228

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:25:40 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Y7ycnXLV4OdNy4KjXTWc3g@comcast.com>
Source record: 38651

I don't want to speak too hastily, but I think that Exar doesn't do this
stuff anymore (I have some XR2215's from the early 1980's hanging around.).

Analog has a couple multipliers -- AD633 and AD834.

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
news:avli2m$8gg$1@freenet9.carleton.ca...
> Dale Parfitt (parinc@verizon.net) writes:
> > Anyone know of a source for this out of mfg analog multiplier IC?
> >
> > Tnx,
> >
> > Dale W4OP
> >
> I have no idea; I can't even remember noticing it before, though
> I knew about the Exar 2208 that started out as the Intersil 2208.
>
> Take note that it's essence is nothing more than a "Gilbert Cell"
> mixer, so common in ICs when a double-balanced mixer is called for.
> If you aren't repairing something (or even if you are, by making
> some changes), there are plenty of such mixers that would do
> basically the same thing, the MC1496, the NE602, the Exar 2208,
> all kinds of ICs that use the scheme in their FM detectors and
> mixers, and even the MC1350. Of course, that isn't dealing with
> levels and other specs, or even exactly what you can control
> from outside; I'm just saying the basic mixer is available in all
> kinds of ICs.
>
> The most obvious difference about the 2208 and the 2228 is
> that it includes an op-amp stage within the package, but unconnected
> to the multiplier. The former also has a buffer stage on the output
> of the multiplier. Since the 2208 seems to have been more
> visible, perhaps it can be found even now.
>
> You might want to be specific about what you need it for.
>
> Michael VE2BVW
>
>

255. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-10 23:44:33 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <22mu1vsfa2uev4827je84vgpdhljjprb5f@4ax.com>
Source record: 38652
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 18:09:18 -0500,
Mike Monett <z06hgto001@sneakemail.com>,
In Newsgroup: sci.electronics.design,
Article: <3E1F529E.7222@sneakemail.com>,
Entitled: "Re: NEED ADVICE: Vacuum tube grid current?",
Wrote the following:

|Jim Thompson wrote:
|
|[...]
|
|> I was lucky. My father-in-law-to-be ran a machine shop. He machined
|> me the most beautiful heat sink you've ever seen ;-)
|> He also planed the head on my '53 Hudson Jet after I warped it by
|> over-heating the engine and blowing the head gasket. Made it pretty
|> speedy... I could get 100MPH out of it ;-)
|>
|> ...Jim Thompson
|
|I could only get about 90 or so in my Dad's '49 Ford Flathead, no matter
|how much I tweaked the carb screws.
|
|I saw one recently in Fry's parking lot in Santa Clara. Could not figure
|out how my girlfriend and I could both fit in the back seat. Not sitting
|up. Well, you know what I mean:)
|
|Mike

Now we're bringing back the remembrances... I had a '50 Nash where the
front seat folded down to make a near-full-size bed ;-)

And the vibrator-powered tube radio would run the battery down in less
than an hour, so you had to park on a hill (fortunately easy to find
in West Virginia).

In my senior year in high school I got a '53 Packard (straight 8),
that car would haul ass! My father sold it while I was at MIT... my
sister was too short to drive it :-(

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	

| Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
| http://www.analog-innovations.com | 1962 |

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

256. Re: Motorola Frequency Synthesis ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 00:22:44 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e1e8245$0$397@echo-01.iinet.net.au>
Source record: 38728
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Gary
I have a couple of 145152s in a tube that I am very unlikely to use.
Could send you these if you want

Richard

Gary Morton <> wrote in message news:3E1E194C.F6BEB883@alma.demon.co.uk...
> Does anyone know a source in the UK, or a source in the US who is
> prepared to ship to the UK, any of the Motorola frequency synthesis ICs
> of the types:-
>
> MC145145
> MC145146
> MC145149
> MC145151
> MC145152
> MC145144
> MC145156
> MC145157
> MC145158
> MC145159
>
> MC145162/6/7/8/9 (60MHz Dual PLL for cordless phones)
>
> I have recently constructed a varicap controlled receiver for the 6m
> band using a NE602 and MC3359. Tuning using a pot is very hit and miss
> and I don't know the frequency. I would like to construct a frequency
> synthesisor to interface to the vco and allow keyboard entry of
> frequency, probably using a PIC. I suspect any of the above parts will
> do (some are serial, some parallel, some 4 bit databus). The serial
> programmed type which connects to the dual modulus prescaler (I found an
> UK supplier for the prescaler!) MC145156 is of particular interest.
>
> The parts for the cordless phones also sound interesting.
>
> I have searched the web and UK suppliers and found only a couple of the
> parts. I got the impression that these parts might be used in CB radios,
> so possibly a CB repair shop might stock them???
>
> Can anyone help?
>
> thanks...
>
> --Gary

257. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 02:41:43 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v1v13kn9qhom96@corp.supernews.com>
Source record: 38653

For one of a kind, I use a drill and a small set of jeweler's files.

258. Re: Ext. battery pack for Yaesu vx5r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 02:44:45 UTC
From: excellent <montgomery.burns@burns.com>
Message-ID: <g51v1vgpt78oeg3spjjrt6886gn7f284lb@4ax.com>
Source record: 38654

On Thu, 9 Jan 2003 11:47:42 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>==========
>Perhaps it is worthwhile mentioning that ,especially NiMH batteries have a
>relatively high 'self discharge' rate.

I read somewhere that it was a problem on older NiMH cells and current
cells are OK. Anybody have details on this?

>To be ready for delivering energy on demand at all times continuous trickle
>charging ,when not in portable use, is recommended . The same applies to
>NiCads being it that their self discharge is somewhat less.
>
>Frank gm0csz.kn6wh@ntlworld.com
>
>

259. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 03:55:00 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avo4ij$ab0$1@knossos.btinternet.com>
Source record: 38655

Use a 1/4" carpenter's chisel on a block of hardwood.

260. FS: Rectifier tubes $1 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 08:30:01 UTC
From: ovrreactor@aol.com
Message-ID: <20030111033001.01838.00000312@mb-mn.aol.com>
Source record: 38644

I am selling 6V3A tubes in oversized padded military boxes. These are indirectly heated rectifiers, 1961-62 date codes. Lots of GE, some Philco/Lansdale.

I have a picture posted at;

http://members.aol.com/ecc81/yardsale

$ 1 each, 52 available. Buy all for $50, and I will pay the shipping to anywhere in the US48.

If interested, PLEASE RESPOND BY EMAIL to < OvrReactor@aol.com >

Regards,
Tom Mitchell
website - http://members.aol.com/ecc81

261. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 12:06:57 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <avp0kvjpv1@news.hccnet.nl>
Source record: 38659

Draw your perimeter. Dril hole inside, say 3 mm. Use a jeweler's saw (a U shaped one with a fine blade). Don't drink alcohol within ten hours before this surgery (;-)). Then use your fine file set. Works great both in aluminium and plastic.
Cheers,
Harke

Al Gerbens <agerbens@msn.com> schreef in berichtnieuws OQjo9LMuCHA.1444@cpimsnntpa03...
> Any ideas on how to make small rectangular holes , say for slide switches,
> in plastic enclosures?
>
>

262. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 12:07:41 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <hOTT9.105623$hK4.8582020@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38660

You might also want to put some sort of resistive termination at the antenna
end of the filter, to eliminate some of the interraction of your auto
antenna.

Pete

Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote in message
news:e_eT9.2943$Fm.124255@newsfep1-win.server.ntli.net...
> > I want to put a cheapo general coverage HF RX on my car,
> > and use a whip antenna, CB-length at most.
> >
> > I have noticed that in my area FM TV and AM RF fields are so
> > ridiculously intense that even professional active antennas have a
> > hard time coping with them. In fact, even good quality car radios
> > have a hard time getting anything unless you REMOVE THE ANTENNA.
> ================
> If you don't get interference when the antenna is removed you can insert a
> Band Pass filter which attenuates freqs below say 2 MHz (to suppress
medium
> wave AM sigs) and attenuates VHF sigs above say 40 MHz from TV-band
1 -and
> FM BC stations).
> In fact a combination of a High Pass - and a Low Pass - filter.
>
> These filters are explained and described in ,among others, the ARRL
> handbooks.
>
> The filter should be fully enclosed in metal (properly bonded to the car
> chassis with the shortest possible strap) and connected to HF radio and
> antenna via good quality coax cable.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>

263. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 12:55:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avp47r$2b8$1@venus.btinternet.com>
Source record: 38661

For L and C component values of very simple low-pass, high-pass, band-pass
filters, download programs -

BANDPAS1

LPF_HPF

Download in a few seconds, run immediately.

=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================

"SpamLover" <n1jpr@hotmail.com> wrote in message
news:95a201e0.0301090125.66242c3@posting.google.com...
> Brethren,
>
> I want to put a cheapo general coverage HF RX on my car,
> and use a whip antenna, CB-length at most.
>
> I have noticed that in my area FM TV and AM RF fields are so
> ridiculously intense that even professional active antennas have a
> hard time coping with them. In fact, even good quality car radios
> have a hard time getting anything unless you REMOVE THE ANTENNA.
>
> Before I embark on building a complicated wideband high-intercept
> point matching preamp, which may turn out to be unusable, I wonder if
> anyone knows how to design a contraption with these features:
>
> 5-20 MHz BANDPASS, A BIT OF ATTENUATION OF AM AND FM BC
>
> INPUT MATCHING A SHORT WHIP (3-5 ft)
>
> OUTPUT INTO 50 OHM
>
>
> I am tempted to design something of this kind:
>
> 1) Pi network, fc=2.5MHz, Zi=Zo=800 ohm
>
> 2) Wideband stepdown RF transformer, Zi=800ohm, Zo=200ohm
>
> 3) T network, Fc=40MHz, Zi=Zo=200ohm

>
> 4) Wideband stepdown RF transformer, Zi=200ohm, Zo=50ohm
>
> [for both 2 and 4:
> winding ratio = 2 to 1
> ZLi >= 3 times Zi @ 9MHz]
>
> 5) Wideband amp at 50 ohm for ham signals,
> or nothing for major broadcasters.
>
> What do you think?
>
> BR, & TIA from Milan
>
> Filippo N1JPR/I2

264. Eico 2266

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 14:34:15 UTC
From: steve <swells244@insightbb.com>
Message-ID: <HXVT9.522148$GR5.238375@rwcrnsc51.ops.asp.att.net>
Source record: 38662

I need to make a test lead for this signal gen.It has an odd connector
anyone know of a supplier for this?
Steve
KG4JNL

265. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 17:46:03 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Hv3U9.358$vx5.449225@newsfep1-win.server.ntli.net>
Source record: 38677

> A hot knife tends to leave a raised ridge around the opening, which
> may then need to be removed.
>
> A drill and a nibbler tool will be faster, neater, and you'll be ready
> for aluminum enclosures later.
>
> A decent nibbler tool will be $15-20.
=======
Bought a nibbler a few years ago from Ratshack $ 9.99 A very useful
tool ,but meant for metal holes.
For small sliding switches the tool is too big.
For plastic holes I also would use a hot knife ,filing the opening to size.
For metal (small) holes I would drill 0.125 in. holes inside corners and use
thin removable jig saw blades (clamped in U-shaped saw handle ,for cut out .

Frank gm0csz.kn6wh@ntlworld.com

266. Re: Eico 2266

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 17:55:58 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Iv3U9.359$vx5.449225@newsfep1-win.server.ntli.net>
Source record: 38678

> I need to make a test lead for this signal gen.It has an odd connector
> anyone know of a supplier for this?
========
Maybe it is easier to replace the current socket with a BNC or SO239 or N
type instead of having to find and purchase a 'special' .

Frank gm0csz.kn6wh@ntlworld.com

267. RadioShack BTX-122 Programming help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 19:38:47 UTC
From: "John L. Wilkerson Jr." <johnwilkers@att.net>
Message-ID: <Xns930094E77F3D5johnwilkersatt@204.127.36.1>
Source record: 38663

I have a pair of RadioShack BTX-122 VHF handhelds (Cat # 19-1203, FCC ID# AAO19-1203)

They are preprogrammed for 2 frequencies and a PL tone. I wish to change these frequencies. The radioshack website has no such instructions online. Does anybody know how to reprogramm these? They have a single 10 switch DIP for programming.

Thanks!

--
John L. Wilkerson Jr. <johnwilkers@att.net>

268. Re: NEED ADVICE: Vacuum tube grid current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 20:37:06 UTC
From: "Kevin G. Rhoads" <kgrhoads@NoSpam.alum.mit.edu>
Message-ID: <01c2b99e$0997a660$0100007f@stupidwin95>
Source record: 38664
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,sci.electronics.design,rec.radio.amateur.homebrew

```
> |Another book to look for is the one from the MIT/RadLab series which
> |deals with vacuum tube characteristics. My uncle showed me the
> |section he wrote, which happened to deal specifically with
> |electrometer tubes and characterization of the grid current for them,
> |so I know it's in there. Sorry I can't give a more exact reference.

? You thinking of Valley and Wallman, Vacuum Tube Amplifiers ?

--
Kevin G. Rhoads, Ph.D. (Linearity is a convenient fiction.)
kgrhoads@NO_SPAM.alum.mit.edu
```

269. Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 21:19:53 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avq1r6rrl1$8302bc10@news.demon.co.uk>
Source record: 38665
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Please take a look at

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1950143667

then look at my other auctions
http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

270. Auction for ARRL VHF Manual ends in under 1 hour

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 21:20:00 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avq1r8rrl2$8302bc10@news.demon.co.uk>
Source record: 38666
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

This auction ends at 21:53:23 GMT Please take a look

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1949234646

then look at my other auctions
http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

271. Re: Eico 2266

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 21:29:00 UTC
From: RaOuL <russ@bit-net.com>
Message-ID: <w00U9.80689$VA5.11678139@news1.news.adelphia.net>
Source record: 38667

Hi Steve,

I'm afraid that I don't know of any direct replacement for the Eico test port connectors. I have a few old probes from my Eico sig gen and Eico sweeper that are badly in need of replacement. What I have done is to replace the output ports on my Eicos with easier to find BNC ports. Now I don't have to worry about the old Eico probes and their difficult to find parts.

73,
Russ KB1GKN

"steve" <swells244@insightbb.com> wrote in message
news:HXVT9.522148$GR5.238375@rwcrnsc51.ops.asp.att.net...
> I need to make a test lead for this signal gen.It has an odd connector
> anyone know of a supplier for this?
> Steve
> KG4JNL

272. Scope Pix 756 Pro 2 Rise Time Settings

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 21:42:31 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-A86C91.16423011012003@netnews.attbi.com>
Source record: 38668

Sometimes effects are easier to see than they are to hear.

http://www.qsl.net/wd1v/756cw.html

72/73
John Seney, WD1V [FN42]
QRP ARCI 10345 K2 #1388
FIST #5014 CC: 1151
http://www.qsl.net/wd1v

273. Using a 'scope as a field-strength-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 22:07:33 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <4mp02v8ni1acmiokgctgglhatajvs8kn6b@4ax.com>
Source record: 38669
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

I was just starting to piece together a breadboard circuit for an RF field strength meter when I happened to notice that keying the low-power transmitter under test (half a Watt out) resulted in a substantial waveform being displayed on my 'scope about 6 feet away (just by induction through the probe lead, I imagine). The question then arose as to whether I needed to build a FSM at all, since the 'scope is obviously sensitive enough on its own to pick up highly local transmissions.
So I'd like to invite views on whether this is feasible or not. I can't see a problem with it, but maybe someone else can. Any ideas, gentlemen?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

274. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 22:07:34 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <c3q02vscarvnbvumcbmnb8m59b0ki1evvr@4ax.com>
Source record: 38670
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 19:30:21 -0000, "John Jardine"
<john@jjdesigns.fsnet.co.uk> opined thusly:

>To be honest, I've only casual knowledge in this interesting area of circuit
>design!.

<gasp!>
I'm impressed, nonetheless.

>Incidentally ... What was your rough gain and source impedance?.

Unity and zero respectively.
Confused? Understandable. It's a Spice simulation. I was aiming to get
a reasonable gain at the required 40Mhz, but there was zilch output.
But everything was fine at 20Khz. I therefore decided to up the
frequency of the voltage source to establish where the gain began to
fall away and this is where the 200Khz comes from. For some reason I
couldn't get the AC sweep to work so had to do it manually - a *real*
drag!

--

"What is now proved was once only imagin'd"
- William Blake, 1793

275. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 22:07:35 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <ecq02vo6la12o3280r7e4etcsbi8rv599n@4ax.com>
Source record: 38671
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 20:44:24 +0000, John Woodgate
<jmw@jmwa.demon.contraspam.yuk> opined thusly:

>A lot of the stuff you've been told is more applicable to operation at
>20 MHz than 200 kHz. I still say that if you want the correct solution,
>you should give more information, preferably a schematic.
>
>Ccb of a small-signal silicon bipolar is NOT a factor at 200 kHz. Unless
>you have a 1 Mohm source, of course, and/or a voltage gain of 100.
>That's why we need more data.

Yes, I appreciate that. Perhaps if Virgin ever get around to fixing up
their lousy service I might be able to post a schematic. But it's
really only a very simple single-stage test circuit; just a transistor
+ bias network to establish where the gain begins to fall away.
There's precious little if anything to account for the stage's
sluggish performance.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

276. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 22:07:38 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <rhq02vc860bnqsseieb925o06thf2lmcdu@4ax.com>
Source record: 38672
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 10 Jan 2003 16:52:13 -0600, "Jeff Verive"
<jeff.verive@tellabs.com> opined thusly:

>What's the application, common emitter, common base, common collector, class
>C, class D, class S, etc? Depending on application, Ccb may be most
>important, hoe may be a factor, etc. In most cases, the most important
>factors may be experimentally determined by playing with the parameters in
>SPICE, but that's just one possible starting point.

Thanks, Jeff. It's common emitter config. in class A; just the initial
stage of an RF rx preamp. Yes, I know you're probably going to say
throw the BJT away and use a FET, but this is of more academic
importance to me now - getting to the bottom of it.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

277. "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 22:07:39 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <9dr02vglshis9qtnrq3cvkaqaj87hnpr99@4ax.com>
Source record: 38673
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

I've come across these in the Farnell catalogue. Does anyone know if
they'd be suitable for use in a 50 ohm dummy load up to say low UHF?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

278. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 23:31:37 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <dc912v4s42o2nk87qeibn12eibllk5c4fq@4ax.com>
Source record: 38676
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sat, 11 Jan 2003 22:07:35 +0000, Paul Burridge
<pb@notthisbit.osiris1.co.uk> opined thusly:

>Yes, I appreciate that. Perhaps if Virgin ever get around to fixing up
>their lousy service I might be able to post a schematic. But it's
>really only a very simple single-stage test circuit; just a transistor
>+ bias network to establish where the gain begins to fall away.
>There's precious little if anything to account for the stage's
>sluggish performance.

For a full description of the problem, please see the new thread
entitled "Transistor amplifiers v. frequency in SPICE"

--

"What is now proved was once only imagin'd"
- William Blake, 1793

279. FA For Auction 1964 and 1961 Popular Electronics Magazines 12 issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 23:40:21 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <avqa12gkr1@slb0.atl.mindspring.net>
Source record: 38674
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.amateur.boatanchors

If interested:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904771978&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904770401&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904766658&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904754959&ssPageName=ADM
E:B:LC:US:1

Jim

280. Re: FA For Auction Popular Electroncis Magazines 1958, 10 issues and 1957, 11 issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-11 23:41:18 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <avqa2rkp1@slb3.atl.mindspring.net>
Source record: 38675
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.amateur.boatanchors

If interested:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904771978&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904770401&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904766658&ssPageName=ADM
E:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2904754959&ssPageName=ADM
E:B:LC:US:1

Jim

281. The Radio Shack Special Project...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 01:31:53 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0301111731.226c5a1@posting.google.com>
Source record: 38679

Hello all,

If anyone is looking for a splendid simple FM receiver, I have one.

I call it the 'Radio Shack Special', since all of the items may be purchased there. I tried to make this project interesting...by not having to mail order any one component. I surrender this project to all.

The sensitivity, selectivity and great audio is second to none. Read what others had said about the project at the website. All are warmly welcome.

The site is at: http://braincambre500.freeservers.com

Respectfully,

Patrick Cambre

282. Re: Using a 'scope as a field-strength-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 01:36:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <uJ3U9.362$vx5.455964@newsfep1-win.server.ntli.net>
Source record: 38680
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

> I was just starting to piece together a breadboard circuit for an RF
> field strength meter when I happened to notice that keying the
> low-power transmitter under test (half a Watt out) resulted in a
> substantial waveform being displayed on my 'scope about 6 feet away
> (just by induction through the probe lead, I imagine). The question
> then arose as to whether I needed to build a FSM at all, since the
> 'scope is obviously sensitive enough on its own to pick up highly
> local transmissions.
> So I'd like to invite views on whether this is feasible or not. I
> can't see a problem with it, but maybe someone else can. Any ideas,
> gentlemen?
==========
A FSM usually needs to be a portable device to test antennas in the (near)
field and unless you have a small portable LCD scope a more traditional
instrument with a moving coil meter or LED bar seems more appropriate.

Frank gm0csz.kn6wh@ntlworld.com

283. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 02:40:40 UTC
From: Oppie <oppie1@cloud9.net>
Message-ID: <v21lci7j099rc3@corp.supernews.com>
Source record: 38681
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

The 'non inductive' resistors have the resistive film in a serpentine rather
than a helical form so that the inductances cancel. The manufacturer should
be able to give a plot of impedance vs frequency.
Farnell is a distributor, who is the manufacturer?

--
For valid response address, remove the '1' following oppie

_____
"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message
news:9dr02vglshis9qtnrq3cvkaqaj87hnpr99@4ax.com...
|
| Hi,
|
| I've come across these in the Farnell catalogue. Does anyone know if
| they'd be suitable for use in a 50 ohm dummy load up to say low UHF?
|
| p.
| --
|
| "What is now proved was once only imagin'd"
| - William Blake, 1793

284. WTB: Ramsey WEFAX

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 03:36:42 UTC
From: "Benjamin, KB9LFZ" <KB9LFZ@arrl.net>
Message-ID: <3e20def6$1_2@news.teranews.com>
Source record: 38683
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.homebrew

Good day to all!

Looking for some Ramsey WEFAX weather satellite reception equipment.
I'm not sure all what came with the orignal package when it was bought
new from Ramsey, but as far as I remember I should be looking for the
weather receiver and the PC card.

if anything, links to where I could build my own 136-138MHz 45KHz wide-
bandwidth receiver would also be good.

Appreciate it!

~Benajmin
de KB9LFZ {arrl.net}

285. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 05:14:46 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <6fWdnQIh4KNdZL2jXTWcqg@comcast.com>
Source record: 38682

Dremel makes a cutter attachment for the rotary tools. I got one from Wal-Mart for about $15, including a couple of blades (bits?). I haven't tried to use it in plastic yet.

Tom, N3IJ

"Yrrah" <harke.smits@hccnet.nl> wrote in message news:avp0kvjpv1@news.hccnet.nl...
> Draw your perimeter. Dril hole inside, say 3 mm. Use a jeweler's saw (a U
> shaped one with a fine blade). Don't drink alcohol within ten hours before
> this surgery (;-)). Then use your fine file set. Works great both in
> aluminium and plastic.
> Cheers,
> Harke
>
> Al Gerbens <agerbens@msn.com> schreef in berichtnieuws
> OQjo9LMuCHA.1444@cpimsnntpa03...
> > Any ideas on how to make small rectangular holes , say for slide switches,
> > in plastic enclosures?
> >
> >
>
>

286. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 05:25:03 UTC
From: mikea@mikea.ath.cx
Message-ID: <avqu7frp1@puck.litech.org>
Source record: 38684

Tom Coates <tecoates@comcast.net> wrote:
> Dremel makes a cutter attachment for the rotary tools. I got one from
> Wal-Mart for about $15, including a couple of blades (bits?). I haven't
> tried to use it in plastic yet.

There are various cutters for Dremel and other small rotary hand
tools. They work _reasonably_ well, although you shouldn't expect
straight edges or square corners. But they're good for an initial
rough cut on a not-too-small rectangular hole.

On plastic, you want to keep the speed and force down, or you'll
melt plastic and form a ridge which then has to be ground down.

--
I stopped and considered for a moment whether such a person would behave
any differently with his head cut right off, but then realized it would
make a difference: it would allow him to stand upright again.
-- Anthony de Boer

287. FA: Meguro IF Sweepscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 07:10:18 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E2114DA.8BAE072B@nettally.com>
Source record: 38685
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3107178343&ssPageName=ADME:B:LC:US:1

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

288. FA: Motorola S1327B Service Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 07:12:31 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E21155F.71D03BA6@nettally.com>
Source record: 38686
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3000385678&ssPageName=ADME:B:LC:US:1

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

289. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 07:23:41 UTC
From: Steve Terry <g4wwk-remove-to-reply-@tesco.net>
Message-ID: <avr58s$ic96m$1@ID-139484.news.dfncis.de>
Source record: 38687
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Martin" <Martin@g1gyc.demon.co.uk> wrote in message
news:avq1r6rrl1$8302bc10@news.demon.co.uk...
> Please take a look at
> http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1950143667
>
Blimey it's with it's original box and packing !
I've converted more of them than the pope.
You can take them up to 29MHz without an eprom or crystal change,
but you need a eprom or 4008 binary adder if you want the 100KHz rpt shift,
and you can switch the 10KHz reference to 5KHz, giving 5KHz steps

It's well worth putting in the missing 2nd If transformer,
and the missing noise sq cct, as fitted to the JWR M2 version.
also produced as the Lucas 1001

SWM was the first to publish mods for it in 1982

Steve Terry

290. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 08:29:53 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <bQNTiMABeSI+Ewi4@jmwa.demon.co.uk>
Source record: 38692
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <c3q02vscarvnbvumcbmnb8m59b0ki1e
vvr@4ax.com>) about 'Limitations of the BC337', on Sat, 11 Jan 2003:

> I was aiming to get
>a reasonable gain at the required 40Mhz, but there was zilch output.
>But everything was fine at 20Khz. I therefore decided to up the
>frequency of the voltage source to establish where the gain began to
>fall away and this is where the 200Khz comes from.

The BC337 certainly WON'T work at 40 MHz, but I still don't see why you
have a problem at 200 kHz. Why won't you post the schematic?
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

291. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 08:30:59 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <dwtSqQADfSI+EwBa@jmwa.demon.co.uk>
Source record: 38693
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <ecq02vo6la12o3280r7e4etcsbi8rv5
99n@4ax.com>) about 'Limitations of the BC337', on Sat, 11 Jan 2003:
>Perhaps if Virgin ever get around to fixing up
>their lousy service I might be able to post a schematic.

Use ASCII art. It's not that difficult. Use Courier font.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

292. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 09:00:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <6D64J1DY6SI+EAWZ@ifwtech.co.uk>
Source record: 38690
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote:
>
>I've come across these in the Farnell catalogue. Does anyone know if
>they'd be suitable for use in a 50 ohm dummy load up to say low UHF?
>
Yes - but you must mount them on a heatsink, so you need to be careful
about the shunt capacitance of a few pF.

I covered this topic extensively in 'In Practice' for June 2002 with a
follow-up in October which said:

John Fielding, ZS5JF, e-mailed with a report of some measurements he
made about five years ago using a vector network analyser (VNA). "Using
a SMA connector with very short leads connected to the sample resistor -
a 100W part made by Craddock - I was amazed to see a perfect 2:1 SWR
right up to 3GHz! Later I obtained some 50 ohm resistors from the same
source and they also behaved perfectly up to 3GHz, the limit of the VNA.
However performance degraded badly when bolted to a heatsink, due to the
capacitive coupling between the flange and the heatsink. As I recall
the SWR was better with the leads connected one way than the other. We
eventually used these resistors as a 50W dummy load for a 30-88MHz
transceiver for 'silent tuning' and they were more than satisfactory.
They are certainly a lot cheaper than the pukka RF load resistors sold
by other firms. When properly heatsinked they will work OK up to about
432MHz at the full rated power." .

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

293. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 09:14:55 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <DxOFa0APITI+Ewzd@jmwa.demon.co.uk>
Source record: 38694
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <9dr02vglshis9qtnrq3cvkaqaj87hnp
r99@4ax.com>) about '"Non-inductive thick film resistors"', on Sat, 11
Jan 2003:
>I've come across these in the Farnell catalogue. Does anyone know if
>they'd be suitable for use in a 50 ohm dummy load up to say low UHF?

Please quote a typical Farnell order code. I looked for them and
couldn't find them, which is why I posted a question here about sources.

If they do a 50 ohm, it must be intended for use as a termination,
because 50 ohms is not a preferred value (47, 51, 56).
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

294. Re: Using a 'scope as a field-strength-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 09:29:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v22dc02hb49ud1@corp.supernews.com>
Source record: 38688
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

The only problem is determining what you're measuring the field strength of. Chances are that your rig isn't tremenously well shielded, so at six feet away, the scope is likely measuring leakage through the box or from power leads, headphone wires, or other wires leaving the box. Although you can tell the rig is generating a signal, the relationship between what you're seeing on the scope and the signal being radiated from the antenna might not be as direct as you'd like.

If you're seeing a signal without the probe being attached to anything indicates that the signal is entering the scope via a path the scope isn't really intended for, such as its power cable or around its shielding. This means that the attenuator might not give the attenuation you expect, making it difficult to make even comparative measurements unless you stay on the same scope scale.

These problems aren't because of the scope, which is just fine as a detector (although it won't have the dynamic range or shielding of a good FSM, if those are important). The problem is the proximity of the detector to the rig. To get a good idea of how much signal is getting radiated from the antenna, you've got to put the detector far enough from the rig that the signal from the antenna is much stronger than leakage from the rig and its re-radiation from local conductors. And, in the case of the scope, you'd also have to connect the input to an antenna that will receive a much larger signal than will leak in via other paths.

Roy Lewallen, W7EL

Paul Burridge wrote:
> Hi,
>
> I was just starting to piece together a breadboard circuit for an RF
> field strength meter when I happened to notice that keying the
> low-power transmitter under test (half a Watt out) resulted in a
> substantial waveform being displayed on my 'scope about 6 feet away
> (just by induction through the probe lead, I imagine). The question
> then arose as to whether I needed to build a FSM at all, since the
> 'scope is obviously sensitive enough on its own to pick up highly
> local transmissions.
> So I'd like to invite views on whether this is feasible or not. I
> can't see a problem with it, but maybe someone else can. Any ideas,
> gentlemen?
>
> p.

295. Re: Using a 'scope as a field-strength-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 09:43:08 UTC
From: mike <spamme0@juno.com>
Message-ID: <3E2138AC.F0743945@juno.com>
Source record: 38689
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Nice thing about the scope is that it gives you
some idea
of the dynamics of the signal. Amplitude
modulation, big spurs,
general badness, that you won't see on a field
strength meter.
Won't help much on low level harmonics unless you
do a FFT on it.
If you put any sort of antenna on the scope input,
it will often
swamp out any signal that's coming in thru other
leakage paths...at least
on a quailty scope. Easy to check by pulling off
the antenna.

mike

Roy Lewallen wrote:
>
> The only problem is determining what you're measuring the field strength
> of. Chances are that your rig isn't tremenously well shielded, so at six
> feet away, the scope is likely measuring leakage through the box or from
> power leads, headphone wires, or other wires leaving the box. Although
> you can tell the rig is generating a signal, the relationship between
> what you're seeing on the scope and the signal being radiated from the
> antenna might not be as direct as you'd like.
>
> If you're seeing a signal without the probe being attached to anything
> indicates that the signal is entering the scope via a path the scope
> isn't really intended for, such as its power cable or around its
> shielding. This means that the attenuator might not give the attenuation
> you expect, making it difficult to make even comparative measurements
> unless you stay on the same scope scale.
>
> These problems aren't because of the scope, which is just fine as a
> detector (although it won't have the dynamic range or shielding of a
> good FSM, if those are important). The problem is the proximity of the
> detector to the rig. To get a good idea of how much signal is getting
> radiated from the antenna, you've got to put the detector far enough
> from the rig that the signal from the antenna is much stronger than
> leakage from the rig and its re-radiation from local conductors. And, in
> the case of the scope, you'd also have to connect the input to an
> antenna that will receive a much larger signal than will leak in via
> other paths.

>
> Roy Lewallen, W7EL
>
> Paul Burridge wrote:
> > Hi,
> >
> > I was just starting to piece together a breadboard circuit for an RF
> > field strength meter when I happened to notice that keying the
> > low-power transmitter under test (half a Watt out) resulted in a
> > substantial waveform being displayed on my 'scope about 6 feet away
> > (just by induction through the probe lead, I imagine). The question
> > then arose as to whether I needed to build a FSM at all, since the
> > 'scope is obviously sensitive enough on its own to pick up highly
> > local transmissions.
> > So I'd like to invite views on whether this is feasible or not. I
> > can't see a problem with it, but maybe someone else can. Any ideas,
> > gentlemen?
> >
> > p.

--
Bunch of stuff For Sale and Wanted at the link
below.
Tek 2465, TFT projector, ham radio, 30pS pulser
Tektronix Concept Books...
http://www.geocities.com/SiliconValley/Monitor/4710/

296. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 11:28:34 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <AncU9.2838$GW.98432@newsfep1-win.server.ntli.net>
Source record: 38691
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Oppie" <oppie1@cloud9.net> wrote in message
news:v21lci7j099rc3@corp.supernews.com...
> The 'non inductive' resistors have the resistive film in a serpentine
rather
> than a helical form so that the inductances cancel. The manufacturer
should
> be able to give a plot of impedance vs frequency.
> Farnell is a distributor, who is the manufacturer?
==========
Caddock -Riverside , California is one of the manufacturers making these
resistors

Their 'KoolTab' models MP820 and 821 parts are in a TO-220 package with
values between 10 and 10000 Ohms and are very suitable for dummy loads and
as the input resistor(s) of valve (tube) type RF linear power amplifiers .
If fitted on a suitable heat sink max power dissipation is 20 Watts .
Standard items have a tolerance of 1%.

From 0.4 -100 MHz SWR = 1 : 1
at 500 MHz SWR = 1 : 1.04
at 1000 MHz SWR = 1 : 1.37
These SWR measurements have been made by someone in Germany ,using a Rhode &
Schwarz ,Scalar Network Analyser and sweep generator 0.4 - 2500 MHz

Frank gm0csz.kn6wh@ntlworld.com

297. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 13:06:24 UTC
From: Martin <marty1kay@earthlink.net>
Message-ID: <kLdU9.5770$Dq.612733@newsread2.prod.itd.earthlink.net>
Source record: 38695

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
news:avqu7frp1@puck.litech.org...
> Tom Coates <tecoates@comcast.net> wrote:
> > Dremel makes a cutter attachment for the rotary tools. I got one from
> > Wal-Mart for about $15, including a couple of blades (bits?). I haven't
> > tried to use it in plastic yet.
>
> There are various cutters for Dremel and other small rotary hand
> tools. They work _reasonably_ well, although you shouldn't expect
> straight edges or square corners. But they're good for an initial
> rough cut on a not-too-small rectangular hole.
>
> On plastic, you want to keep the speed and force down, or you'll
> melt plastic and form a ridge which then has to be ground down.
>
>
I've found a fret saw with a fine tooth blade and the work clamped firmly
can do a good job. It's particularly useful for slots that are narrower
than the nibbler.

298. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 13:10:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <BHO2IkBIIWI+EAwv@ifwtech.co.uk>
Source record: 38696
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate wrote:
>I read in sci.electronics.design that Paul Burridge
><pb@notthisbit.osiris1.co.uk> wrote (in <9dr02vglshis9qtnrq3cvkaqaj87hnp
>r99@4ax.com>) about '"Non-inductive thick film resistors"', on Sat, 11
>Jan 2003:
>>I've come across these in the Farnell catalogue. Does anyone know if
>>they'd be suitable for use in a 50 ohm dummy load up to say low UHF?
>
>Please quote a typical Farnell order code. I looked for them and
>couldn't find them, which is why I posted a question here about sources.
>
Try 306-6952, 100R 50W (omit the hyphen when searching the Farnell web
site... duh...)

The 50W range is better value for money than the 20W.

I asked Farnell for more details of the RF performance, but they don't
have any more useful information than is given in the brief catalogue
description.

>If they do a 50 ohm, it must be intended for use as a termination,
>because 50 ohms is not a preferred value (47, 51, 56).

The catalogue dealers do not stock all preferred values (not even the
full E6 range). If you don't mind the extra capacitance, two 100R units
in parallel will give more dissipation and better spreading of the heat
load.

One way to deal with the stray capacitance is to make it act as the "C2"
of a symmetrical pi-network. In other words, you connect to the
resistors with a small shunt C (equal to the value you're trying to
compensate in the resistors) and a small series L. In practice, the
shunt input C is variable, and is adjusted for lowest VSWR.

This network forms a lowpass filter with a 1:1 impedance transformation,
and is transparent to low frequencies. At higher frequencies, a bit of
modelling will show how the stray reactances can be compensated exactly
at one chosen frequency; the tradeoff is a small increase in VSWR at
lower frequencies, but a steep rise above the compensation point.

I covered this in my November 2002 column, in the context of
compensating the input capacitance of a tetrode operated in 'passive
grid' (with a tube input capacitance of 30-50pF).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)

Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

299. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 14:32:18 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avrual$45j$1$830fa17d@news.demon.co.uk>
Source record: 38597
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

```
"Steve Terry" <g4wwk-remove-to-reply-@tesco.net> wrote in message
news:avr58s$ic96m$1@ID-139484.news.dfncis.de...
> "Martin" <Martin@g1gyc.demon.co.uk> wrote in message
> news:avq1r6$rrl$1$8302bc10@news.demon.co.uk...
> > Please take a look at
> > http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1950143667
> >
> Blimey it's with it's original box and packing !
> I've converted more of them than the pope.
> You can take them up to 29MHz without an eprom or crystal change,
> but you need a eprom or 4008 binary adder if you want the 100KHz rpt
shift,
> and you can switch the 10KHz reference to 5KHz, giving 5KHz steps
>
> It's well worth putting in the missing 2nd If transformer,
> and the missing noise sq cct, as fitted to the JWR M2 version.
> also produced as the Lucas 1001
>
> SWM was the first to publish mods for it in 1982
>
> Steve Terry
>
>

This man knows a good rig !!
```

300. Re: Rectangular holes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 14:42:28 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v2300u4lj2hs74@corp.supernews.com>
Source record: 38598

They make a special kind of knife for cutting Plexiglas which works well on some holes, but in the specific case of a slide switch, I don't think it would work all that well. I'd be inclined to stick with the X-Acto knife for a hole that small.

For many larger holes, LCD's and the like, I avoid the problem altogether by making a panel from Plexiglas and backing it with paper containing my labels etc. It's a lot easier to cut a hole in paper than plastic! Scraps of plexi adequate for panels are often available very cheaply at the hardware store. Glossy paper makes nice crisp lettering and isn't obviously paper behind the panel.

..

"Martin" <marty1kay@earthlink.net> wrote in message
news:kLdU9.5770$Dq.612733@newsread2.prod.itd.earthlink.net...
>
> "Mike Andrews" <mikea@mikea.ath.cx> wrote in message
> news:avqu7frp1@puck.litech.org...
> > Tom Coates <tecoates@comcast.net> wrote:
> > > Dremel makes a cutter attachment for the rotary tools. I got one from
> > > Wal-Mart for about $15, including a couple of blades (bits?). I
haven't
> > > tried to use it in plastic yet.
> >
> > There are various cutters for Dremel and other small rotary hand
> > tools. They work _reasonably_ well, although you shouldn't expect
> > straight edges or square corners. But they're good for an initial
> > rough cut on a not-too-small rectangular hole.
> >
> > On plastic, you want to keep the speed and force down, or you'll
> > melt plastic and form a ridge which then has to be ground down.
> >
> >
> I've found a fret saw with a fine tooth blade and the work clamped firmly
> can do a good job. It's particularly useful for slots that are narrower
> than the nibbler.
>
>

301. How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 15:57:16 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0301120757.33d3f4bc@posting.google.com>
Source record: 38599
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

What do you use to amplify small DC voltages?

The trouble with amplifying DC voltage is the interference from DC offsets in the amplifier. While you can use a high-pass filter to remove the DC offset for an amplifier in the audio or higher frequencies, this is not an option for DC, as this would attenuate the DC signal as much as the DC offset.

Jason Hsu, AG4DG
usenet@@@@@@@@@@@@jasonhsu.com

302. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 16:11:44 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <oL9vkECAPZI+Ew0n@jmwa.demon.co.uk>
Source record: 38604
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Ian White, G3SEK
<G3SEK@ifwtech.co.uk> wrote (in <BHO2IkBIlWI+EAwv@ifwtech.co.uk>) about
'"Non-inductive thick film resistors"', on Sun, 12 Jan 2003:

>Try 306-6952, 100R 50W (omit the hyphen when searching the Farnell web
>site... duh...)

Thank you. That steered me to the right page in the hard-copy catalogue.
I only need 0.5 W rating, so the 5 watt MCP series will do: I haven't
all that much room, or budget!
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

303. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 16:16:21 UTC
From: repatch <repatchh@yahoo.com>
Message-ID: <qxgU9.77$0E.43831@news20.bellglobal.com>
Source record: 38601
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

Instrumentation amplifier properly calibrated? Not very hard to set up.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

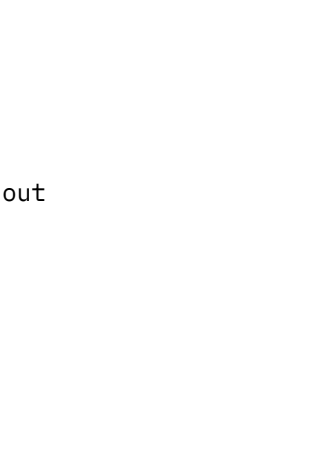
304. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 16:16:48 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <avs4dg030s7@drn.newsguy.com>
Source record: 38602
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote...
>
> John Jardine opined,
>>
>> Incidentally ... What was your rough gain and source impedance?.
>
> Unity and zero respectively.
>
> Confused? Understandable. It's a Spice simulation. I was aiming to get
> a reasonable gain at the required 40Mhz, but there was zilch output.

The BC337 is a respectable and popular transistor. A web search shows huge quantities available on distributors shelves at very low prices, from at least 12 different semi manufacturers (e.g., Newark has 10179 available of ON Semi parts for 5 cents, qty 1k).

According to the Siemens data sheet, the BC337 has f_T over 100MHz for collector currents from 7 to 170mA with Vce=5V, and an f_T of 180MHz at 50mA. ON semi's data sheet shows its Ccb capacitance is only 5pF at 5V. So BC337 transistors can make a 40MHz amplifier, especially if several are used. It's entirely a matter of your specific circuit design. For example, this simple circuit biases the BC337 near 20mA and 5V, and is intended for use with a 50-ohm source and load. At 200kHz and below its voltage gain should be about 35 to 40, if my back-of-the-envelope is working. It should still have a gain of say 2 or so by 40MHz (a more complex circuit could have a "flat" gain to 40MHz).



Tell us about your design, the collector current, load resistance, the bias setup, emitter resistor and bypassing if any, etc., etc.

What spice software are you using? Post your BC337 model for us;
let's get to the bottom of this "zilch" business. :>)

Thanks,
- Win

305. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 16:21:28 UTC
From: Arthur Jernberg <stubby@comcast.net>
Message-ID: <RaqcnaFFy5yUC7yjXTWcow@comcast.com>
Source record: 38600
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

```
? are you wanting to amplify the actual change of status while monitoring a
set DC level?? If so place a cap in series with the DC line being monitored
and then apply processing to the resultant ac pulse.
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com
```

306. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 17:04:53 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <avs77l0ael@drn.newsguy.com>
Source record: 38603
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Winfield wrote...
>
> ... For example, this simple circuit biases the BC337 near
> 20mA and 5V, and ... [snip]
>
>. +12V
>. |
>. 330
>. |
>. ,-----+
>. | +----||--- out
>. 3.3k |
>. | C BC337
>. --||--+---B
>. | E
>. 560 |
>. | gnd
>. gnd
```

In real life a BC337 would be OK with these values, because 20mA * 5V = 100mW, and a thermal resistance of about 200C/W means its junction temp would rise by a modest 20C.

Thanks,
- Win

307. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 18:11:43 UTC
From: Ban <bansuri@masterweb.it>
Message-ID: <zdiU9.20703$0v.573821@news1.tin.it>
Source record: 38605
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

Jason Hsu wrote:
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

Use a chopper stabilized opamp such as the TLC2652A by Texas Instrument.
It has a 1uV max offset voltage only.
--
ciao Ban
electronic hardware designer
http://thinkamove.com/

308. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 18:31:38 UTC
From: Bill Sloman <bill.sloman@ieee.org>
Message-ID: <avscarcdi1@reader11.wxs.nl>
Source record: 38606
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.

Electronic engineers use chopper amplifiers, and physicists modulate the source of the DC, and selectively amplify and detect the modulated output -basically the same idea as a chopper amplifier.

Horowitz and (Win) Hill's "The Art of Electronics" ISBN: 0521370957 has a useful chapter on this sort of stuff.

Bill Sloman, Nijmegen

309. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 19:32:37 UTC
From: John Larkin <jjlarkin@highSNIPlandTHIStechPLEASEnology.etc>
Message-ID: <sbg32vkqsadlpqheho4o9r15i1g794vgkv@4ax.com>
Source record: 38607
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

On 12 Jan 2003 07:57:16 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>What do you use to amplify small DC voltages?
>
>The trouble with amplifying DC voltage is the interference from DC
>offsets in the amplifier. While you can use a high-pass filter to
>remove the DC offset for an amplifier in the audio or higher
>frequencies, this is not an option for DC, as this would attenuate the
>DC signal as much as the DC offset.
>
>Jason Hsu, AG4DG
>usenet@@@@@@@@@@@@jasonhsu.com

Depends on what you consider 'small'. You can buy cheap opamps with
offsets of a few millivolts, and drifts on the order of 10 uV per
degree C. Or really good chopper opamps that are roughly 1000:1
better. At very low levels, thermoelectric effects, stray RF, leakage,
noise, and magnetic fields get to be annoying.

John

310. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 19:48:16 UTC
From: jorgeomar@ieg.com.br
Message-ID: <e69389e6.0301121148.66e8faec@posting.google.com>
Source record: 38608
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

Which is the level of the voltage you want to amplify?

There are opamps with almost zero DC offsets that can be used for
small voltages - say, up to 10V maximum.

Take a look at:

www.linear.com
www.analog.com

among others, and compare precision opamps.

Jorge

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0301120757.33d3f4bc@posting.google.com>...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

311. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 20:07:37 UTC
From: "jon....." <nospamta@yahoo.co.uk>
Message-ID: <avshub$iu67a$1@ID-109323.news.dfncis.de>
Source record: 38609
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Steve Terry" <g4wwk-remove-to-reply-@tesco.net> wrote in message
news:avr58s$ic96m$1@ID-139484.news.dfncis.de...
> "Martin" <Martin@g1gyc.demon.co.uk> wrote in message
> news:avq1r6rrl1$8302bc10@news.demon.co.uk...
> > Please take a look at
> > http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1950143667
> >
> Blimey it's with it's original box and packing !
> I've converted more of them than the pope.
> You can take them up to 29MHz without an eprom or crystal change,
> but you need a eprom or 4008 binary adder if you want the 100KHz rpt
shift,
> and you can switch the 10KHz reference to 5KHz, giving 5KHz steps
>
> It's well worth putting in the missing 2nd If transformer,
> and the missing noise sq cct, as fitted to the JWR M2 version.
> also produced as the Lucas 1001
>
> SWM was the first to publish mods for it in 1982
>
> Steve Terry
>
>
I've got 3 of them and a box and 2 lots of instructions 1 works 2 don't
--
Jon

312. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 20:44:46 UTC
From: Steve Terry <g4wwk-remove-to-reply-@tesco.net>
Message-ID: <avsk6k$jcu1f$1@ID-139484.news.dfncis.de>
Source record: 38610
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Martin" <Martin@g1gyc.demon.co.uk> wrote in message
news:avrual$45j$1$830fa17d@news.demon.co.uk...
> "Steve Terry" <g4wwk-remove-to-reply-@tesco.net> wrote in message
> news:avr58s$ic96m$1@ID-139484.news.dfncis.de...
> > "Martin" <Martin@g1gyc.demon.co.uk> wrote in message
> > news:avq1r6rrl1$8302bc10@news.demon.co.uk...
> > > Please take a look at
> > > http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1950143667
> > >
> > Blimey it's with it's original box and packing !
> > I've converted more of them than the pope.
<snip>
> This man knows a good rig !!
>
I didn't say that, but they were the easiest of all CBs to mod,
and not the worse ones made

A 2pole Xtal filter in the 10.695MHz first IF helps the RX,
and I was surprised Icom didn't sue them for copyright infringement
AFAIK they were made in Taiwan to their own design

Steve Terry

313. Re: training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 20:49:21 UTC
From: Karl <null_dev@earthlink.net>
Message-ID: <3E212D49.7080206@earthlink.net>
Source record: 38611

Some ham radio clubs may help an interested person learn
enough to get their license. If you find such a friendly
group (not as common as in years past) the informal
education may be what you need to get started.
Don't expect it to be quick though. Learning by hobby is not
the fast route to education.
A search of Amateur Radio related websites should be enough
to tell if this is what you want. The ARRL should be the
best source.

314. Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 21:40:01 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <LhrB5zUxCeI+Ewip@fslife.co.uk>
Source record: 38612

I'm trying to locate a substitute for a TP9383 RF power transistor.

My Jaeger sub book does not list any.

I wonder if anyone can suggest anything?

This is the final output device in an early Rohde & Schwarz 50w FM
broadcast exciter.

Thank you.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

315. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 22:33:40 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avstrsrjr1$8300dec7@news.demon.co.uk>
Source record: 38615
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

> <snip>
> > This man knows a good rig !!
> >
> I didn't say that, but they were the easiest of all CBs to mod,
> and not the worse ones made
>
> A 2pole Xtal filter in the 10.695MHz first IF helps the RX,
think I got a couple of them from "Ambit" (Cirkit now) in the
junk box as well..... Mutter mutter shed dark no lights etc
well I will have a look in the morning.

> and I was surprised Icom didn't sue them for copyright infringement
> AFAIK they were made in Taiwan to their own design
>
Yes a bit funny that mind you ther might have been some back haded
deals going on ?? (not a chance)

> Steve Terry
>
>
see you Martin

316. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 22:49:07 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3E21F0E3.104AD7DB@ix.netcom.com>
Source record: 38613

Philip de Cadenet wrote:
>
> I'm trying to locate a substitute for a TP9383 RF power transistor.
>
> My Jaeger sub book does not list any.
>

Motorola used to reckon an MRF141....

GL

dr

317. Re: HELP! BROADCAST FM XMTR NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 23:25:29 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <JPmU9.13235$GA.1078055@news2.telusplanet.net>
Source record: 38614

No transmitter is broke forever, maybe tell us what type and model and what he need to get the rig back up. It's a lot easier to ship a few parts than a complete xmitter.

Another point, there is always an endless supply of advice on how to repair theses things.

Lets have a few details

Gerry MacDonald
RF Tech services Global Network

"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message news:iu6r1vc2kuif1jcmu3kqrnh0r54k46qssd@4ax.com...
> On 8 Jan 2003 07:31:02 -0800, dangett@yahoo.com (Dan Gett) opined
> thusly:
>
> >Dear Frank,
> >
> >I am asking for a donated transmitter to help a friend of mine who
> >operates a full power fm. He is a good guy that helps a lot of people
> >in the broadcast industry...but who also has too much pride to get out
> >here and ask for help himself when he is in need. HE is broke and his
> >transmitter is beyond repair.
> >
> >As a fellow ham I am asking those BROADCAST ENGINEERS out here with a
> >heart who have been in a similar jam at least once in their careers to
> >help out.
>
> If he's broke, how's he going to afford the electricity to run such a
> monster? Or would he like a free generator as well?
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

318. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-12 23:40:37 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0301121540.44c25719@posting.google.com>
Source record: 38616
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0301120757.33d3f4bc@posting.google.com>...
> What do you use to amplify small DC voltages?

Use a chopper stabilized operational amplifier.

Harry C.

319. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 01:03:39 UTC
From: Crusty Curmudgeon <crusty@wyenot.dot.servebeer.dot.com>
Message-ID: <sv342vkg6mgnsiedd1j5pjdp1uohjs5bul@4ax.com>
Source record: 38617

No need to sub. It's still available. E60 price tag shown here-
http://www.xs4all.nl/~zonderva/dutchtransmitter/nl/dept_13.html

On Sun, 12 Jan 2003 21:40:01 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>I'm trying to locate a substitute for a TP9383 RF power transistor.
>
>My Jaeger sub book does not list any.
>
>I wonder if anyone can suggest anything?
>
>This is the final output device in an early Rohde & Schwarz 50w FM
>broadcast exciter.
>
>Thank you.
>
>(((73)))

"Make peace an attitude. Want it. Make peace a habit. Live it. Make peace a reality. Share it." Mattie Stepanek, age 11,
speaking from his wheelchair to school children in Independence MO. Mattie, a published poet and television celebrity,
spoke at the annual peace assembly at Community of Christ headquarters, May 2002.

320. Can someone identify this part?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 01:07:58 UTC
From: Dan Stanger <dan.stanger@ieee.org>
Message-ID: <3E22116E.81473862@ieee.org>
Source record: 38618

It looks like some vhf transistor, however, motorola cannot identify it.

Perhaps someone has a product that has one of these in it, and can
tell me how its used, or give me some other sugestion on how to identify
it.
Thanks,
Dan Stanger

321. Re: Getting hiss along with strong CW signals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 01:54:23 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <j%oU9.10252$H76.825831@news1.east.cox.net>
Source record: 38619

I think you might want to start tracing with a good scope to see
exactly what is going on, and at what stage the problem is
developing. Kind of hard to second guess the cause. You could
try using an outboard amp. and see if the problem persists, or
use the outboard amp as a signal tracer along the AF signal
path.

Peter K1ZJH

"Bill Harbour" <w.harbourjr@worldnet.att.net> wrote in message
news:deafe3d9.0301091236.5b3fc48d@posting.google.com...
> I'm getting a hiss that accompanies very strong CW signals out of my
> HB 20m single conversion superhet receiver. There is no hiss on the
> quieter CW notes. The receiver is pretty straight forward...antenna
> into a SA602AN first miser, followed by a 2N2222 emitter follower amp
> then through a 3 4.915Mhx crystal filter terminated into 220ohms, then
> through a SA602AN BFO outputing differentially into a NE5532 LPF then
> onto a LM386 final audio amp.
>
> Any idea where to start looking? One of the audio sections was
> breaking into oscillation when the strong signal arrived but I changed
> a few output/coupling cap values and that's largely gone away. Is the
> hiss a sign that I'm still getting some oscillation?
>
> Thanks,
>
> Bill
> K4VIB

322. Re: Can someone identify this part?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 02:10:07 UTC
From: crabtreejr@aol.com
Message-ID: <20030112211007.14146.00000623@mb-ca.aol.com>
Source record: 38620

Dan Stanger dan.stanger@ieee.org on 1/12/03 wrote:

>It looks like some vhf transistor, however, motorola cannot identify it.

>Perhaps someone has a product that has one of these in it, and can
>tell me how its used, or give me some other sugestion on how to
>identify it.
>Thanks,
>Dan Stanger

A few moments poking around at Yahoo revealed that the M9583:
i) is or was a Motorola VHF power transistor
ii) was used in the Maxor 80 (160MHz transceiver) PA stage
specifically the TLD9102A and 9103A power amp boards
iii) had a power output rating of ca. 25-30 watts
iv) had Motorola part number 48-869583
or S-48-869583IMS
v) is almost certainly obsolete
vi) is possibly still available in the surplus market. See
http://www.downeastmicrowave.com/Surplus.htm
vii) may have substitutes, but you are on your own here.

Good luck and 73

John KC0GGH

323. Re: Auction for Icom 1050 CB Rig (Ideal for 10m FM)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 02:11:55 UTC
From: Steve Terry <g4wwk-remove-to-reply-@tesco.net>
Message-ID: <avt7c3$j8kc6$1@ID-139484.news.dfncis.de>
Source record: 38621
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Martin" <Martin@g1gyc.demon.co.uk> wrote in message
news:avstrsrjr1$8300dec7@news.demon.co.uk...
> > <snip>
> > A 2pole Xtal filter in the 10.695MHz first IF helps the RX,
>
> think I got a couple of them from "Ambit" (Cirkit now) in the
> junk box as well..... Mutter mutter shed dark no lights etc
> well I will have a look in the morning.
>
The ambit 8KHz 10.695 2 pole Xtal filters are a bit sharp for 10FM

Something like a cheap 10M30 10.7 +-15KHz Xtal filter will do fine,
which works out as -10 +20KHz at 10.695,
or even a 50KHZ 10.7 ceramic filter if you can still get them ?

Anything's better than the 150KHz ceramic filter they use
to protect the internal 2nd mixer in the MC3357 chip

and dig out a Toko 7mm 455 IFT from a scrap tranny radio,
for where they've left it out on the end of the CFU455 filter
in the ICOM 1050, but fitted in the JWR M2 version.
It improves 455 filtering outside the CFU ceramic filters B/W
and gives a better match to it

Steve Terry

324. VariL CM-1 DBM as used in R7/TR7

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 09:05:31 UTC
From: no.spam.lasse.moell@no.spam.swipnet.se
Message-ID: <3e227f0f.653908@news.lin.foa.se>
Source record: 38622

Someone asked for data on the 1:st mixer used in theTR7/R7 radios and
said it was labeled as Vari-L CM1.
Their databook says:
CM-1 Low cost Miniature Double Balanced Mixer .5-500 MHz
LO Power Range +4 to +13 dBm
1 dB Compression Point 0 dBm
1 dB Desensitization Point -2 dBm
3rd Order Intercept Point +13 dBm
Isolation typ. R-X 30 dB 1-100 MHz, L-R, L-X >50 dB 1-100 MHz (as read
from graphs)

Pin Connections:
LO 8
RF 1
IF 3,4
Ground 2, 5,6,7
Case 2
Note pins 3 and 4 must be connected together
all ground pins must be grounded

I can do a pdf on the complete specs if required.

Cheers
Lasse SM5GLC

325. RF feedback, anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 10:26:40 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <6ra12vcdvjgdnnecneqpqohvmu4b90np28@4ax.com>
Source record: 38623
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

Let's say I have a hand-held transmitter operating on 40Mhz. I take a 'sample' signal from it and feed it via a 6 foot cable to a separate low power linear amplifier. It's then fed back via a different wire in the same cable to the tx for transmission from the tx's antenna. Let's say the 'sample' RF is 2v peak-peak and the return, amplified signal is 20v p-p. Can I get away with this or am I likely to have problems with feedback owing to the wires being in such close proximity? Would using shielding on one or both of the wires help if this set-up is likely to cause problems?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

326. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 11:00:04 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <kl552v4f9bh7hrk46u783m9n1hr9kp9oe8@4ax.com>
Source record: 38626
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 12 Jan 2003 13:10:32 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> opined thusly:

>The catalogue dealers do not stock all preferred values (not even the
>full E6 range). If you don't mind the extra capacitance, two 100R units
>in parallel will give more dissipation and better spreading of the heat
>load.

Which is precisely what I'd intended to do.
So far as the problem of capacitive effects from adding heat-sinking,
how about having no metallic heat-sinking at all and simply immersing
the devices as they are in a sealed can of oil?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

327. Re: Limitations of the BC337

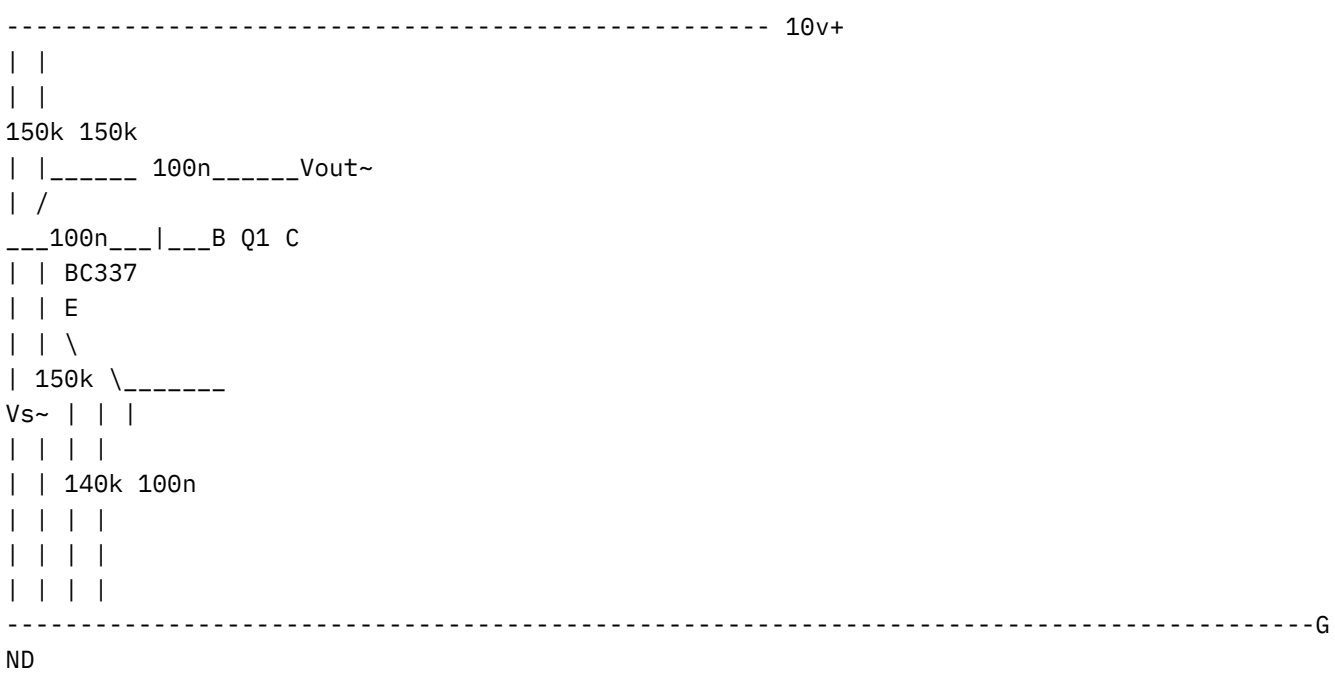
Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 11:00:05 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <9t552vcgf5jqcpn7u36tifq0hos4jfsqt7@4ax.com>
Source record: 38627
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 12 Jan 2003 08:30:59 +0000, John Woodgate
<jmw@jmwa.demon.contraspam.yuk> opined thusly:

>I read in sci.electronics.design that Paul Burridge
><pb@notthisbit.osiris1.co.uk> wrote (in <ecq02vo6la12o3280r7e4etcsbi8rv5
>99n@4ax.com>) about 'Limitations of the BC337', on Sat, 11 Jan 2003:
>>Perhaps if Virgin ever get around to fixing up
>>their lousy service I might be able to post a schematic.
>
>Use ASCII art. It's not that difficult. Use Courier font.

Oh very well....

For those of you who are unable to resolve a net list (posted under
another thread) here's my best attempt:



Flippin' 'eck. I hope no one asks me to do that again!

--

"What is now proved was once only imagin'd"
- William Blake, 1793

328. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 12:18:11 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <o3Xp8cdD6qI+EwmM@fslife.co.uk>
Source record: 38625

>> I'm trying to locate a substitute for a TP9383 RF power transistor.
>>
>> My Jaeger sub book does not list any.
>>
>
>Motorola used to reckon an MRF141....
Thanks Dan.

I'll go look it up.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

329. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 12:19:18 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <jnmro0dG7qI+EwHJ@fslife.co.uk>
Source record: 38624

Crusty,

>No need to sub. It's still available. E60 price tag shown here-
>http://www.xs4all.nl/~zonderva/dutchtransmitter/nl/dept_13.html
I know Daniel and he currently has no stock!

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

330. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:02:22 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <avudcu01k4k@drn.newsguy.com>
Source record: 38629
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Winfield wrote...
>
> Paul Burridge wrote...
>>
>> John Jardine opined,
>>>
>>> Incidentally ... What was your rough gain and source impedance?.
>>
>> Unity and zero respectively.
>>
>> Confused? Understandable. It's a Spice simulation. I was aiming to get
>> a reasonable gain at the required 40Mhz, but there was zilch output.
>
> The BC337 is a respectable and popular transistor. A web search
> shows huge quantities available on distributors shelves at very
> low prices, from at least 12 different semi manufacturers (e.g.,
> Newark has 10179 available of ON Semi parts for 5 cents, qty 1k).
>
> According to the Siemens data sheet, the BC337 has f_T over 100MHz
> for collector currents from 7 to 170mA with Vce=5V, and an f_T of
> 180MHz at 50mA. ON semi's data sheet shows its Ccb capacitance is
> only 5pF at 5V. So BC337 transistors can make a 40MHz amplifier,
> especially if several are used. It's entirely a matter of your
> specific circuit design. For example, this simple circuit biases
> the BC337 near 20mA and 5V, and is intended for use with a 50-ohm
> source and load. At 200kHz and below its voltage gain should be
> about 35 to 40, if my back-of-the-envelope is working. It should
> still have a gain of say 2 or so by 40MHz (a more complex circuit
> could have a "flat" gain to 40MHz).
>
>. +12V
>. |
>. 330
>. |
>. ,-----+
>. | +----||--- out
>. 3.3k |
>. | C BC337
>. --||--+---B
>. | E
>. 560 |
>. | gnd
>. gnd
```

Ran a spice response plot of my circuit above. Showed gain of
16.0 flat to 3MHz, down 3dB at 10MHz. Gain = 3.88 at 40MHz
for our BC337 with 50-ohm source and load. That indicates an
f_T better than 155MHz for the spice part model at 20mA and 5V.

Thanks,
- Win

331. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:13:01 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <oJCdnVZuod8gJr-jXTWcrg@comcast.com>
Source record: 38628
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

I use a chopper amp from TI in a pH meter. A good source to check is Analog Devices or Texas Instruments (which now owns Burr-Brown.) In particular, ADI has an application note on "finding the needle in a haystack".

Other things to consider -- at small, very small voltages, every node potentially picks up radio frequency interference, computer noise etc -- you want top and bottom ground planes, decoupling of the power supply, isolation of digital and analog grounds etc. -- again see the apnotes at TI on ADC selection since the info there will speed your quest.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

332. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:28:53 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <xpoJ8tAV8rl+Ew1H@jmwa.demon.co.uk>
Source record: 38635
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <9t552vcgf5jqcpn7u36tifq0hos4jfs
qt7@4ax.com>) about 'Limitations of the BC337', on Mon, 13 Jan 2003:
>For those of you who are unable to resolve a net list (posted under
>another thread) here's my best attempt:

I don't know what you did, but you don't appear to have used Courier
font, unless you used a lot of TABs instead of spaces. Look at Win's
version in this thread to see how to do it properly.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

333. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:35:33 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <avufb501sb3@drn.newsguy.com>
Source record: 38632
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Paul wrote...
>
> John Woodgate opined thusly:
>
>> Paul Burridge wrote
>>> Perhaps if Virgin ever get around to fixing up
>>> their lousy service I might be able to post a schematic.
>>
>> Use ASCII art. It's not that difficult. Use Courier font.
>
> Oh very well.... For those of you who are unable to resolve
> a net list (posted under another thread) here's my best attempt:

Very nice Paul, good first try! I removed some extra spaces,
tabs?, etc., whatever, to make it viewable with a fixed font.

> -------------------- 10v+
> | |
> 150k 150k
> | |______ 100n______Vout~
> | |
> | C/
> ___100n___|____B Q1
> | | E BC337
> | | \
> | 150k |_______
> Vs~ | | |
> | | 140k 100n
> | | | |
> -------------------------------GND
>
> Flippin' 'eck. I hope no one asks me to do that again!

OK, ran a spice plot of this. The low input capacitor value means
it's having difficulty with frequencies below 1.6kHz - it reaches
a gain of +45dB and is flat from 5 to 40kHz. It's down -3dB by
107kHz, and has no gain at 40MHz as you observed. That's because
you've got the BC337 running starved at Ic = 80uA and Vce = 0.76V,
and with a high 150k load (note my comments on the effect of Cob).
Note my post a few minutes ago showing a gain of about 4x for the
BC337 at 40MHz, using a circuit better suited for high frequencies.

Thanks,
- Win
```

334. Re: "Non-inductive thick film resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:50:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <jMnOa6EvQsI+EA1e@ifwtech.co.uk>
Source record: 38636
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote:
>On Sun, 12 Jan 2003 13:10:32 +0000, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> opined thusly:
>
>>The catalogue dealers do not stock all preferred values (not even the
>>full E6 range). If you don't mind the extra capacitance, two 100R units
>>in parallel will give more dissipation and better spreading of the heat
>>load.
>
>Which is precisely what I'd intended to do.
>So far as the problem of capacitive effects from adding heat-sinking,
>how about having no metallic heat-sinking at all and simply immersing
>the devices as they are in a sealed can of oil?

It won't work, because the heat transfer rate from the little TO220 tab
into the bulk of the oil is far too low.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

335. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 13:54:39 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E22C51F.3B0D@sneakemail.com>
Source record: 38630
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
[...]

> >
> >. +12V
> >. |
> >. 330
> >. |
> >. ,-----+
> >. | +----||--- out
> >. 3.3k |
> >. | C BC337
> >. --||--+---B
> >. | E
> >. 560 |
> >. | gnd
> >. gnd
>
> Ran a spice response plot of my circuit above. Showed gain of
> 16.0 flat to 3MHz, down 3dB at 10MHz. Gain = 3.88 at 40MHz
> for our BC337 with 50-ohm source and load. That indicates an
> f_T better than 155MHz for the spice part model at 20mA and 5V.
>
> Thanks,
> - Win

Do you remember Cam Searle at MIT? He would walk into the lecture and
pull a ball of circuitry from his coat pocket.

He would flatten it out and show everyone it was a 3 transistor amplifier
with feedback, built directly over the schematic.

I forget the gain, perhaps 30 dB or so. The amazing thing it was flat to
100 MHz!

This was in 1968. Transistors were not very good in those days:)

Mike

336. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 14:18:32 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <p7g52v43ndm1g8vcfta0lnta5259pc30mf@4ax.com>
Source record: 38633

On Mon, 13 Jan 2003 12:19:18 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> opined thusly:

>Crusty,
>
>>No need to sub. It's still available. E60 price tag shown here-
>>http://www.xs4all.nl/~zonderva/dutchtransmitter/nl/dept_13.html
>I know Daniel and he currently has no stock!

How about an MRF233? It's not a direct substitute but may well do what
you want, nonetheless.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

337. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 14:29:27 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <a5j52v0o38rf1jp9sdmedcocqtd2rsslib@4ax.com>
Source record: 38634
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
<john@jjdesigns.fsnet.co.uk> opined thusly:

>That 200kHz will be due to, too high a gain, capacitive loading effects,
>high source resistance.

I know this is probably a dumb question and I'm going to kick myself
when I read the answer, but how does a high source
resistance/impedance influence an amp's frequency response?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

338. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 15:41:54 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <pam52vchb6n6gqq81i0davva1vp7ale0h8@4ax.com>
Source record: 38637
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 13 Jan 2003 13:36:50 +0000, John Woodgate
<jmw@jmwa.demon.contraspam.yuk> opined thusly:

>I think he would be better advised to do some hands-on work with real
>parts. He seems to be singularly susceptible to the pitfalls that
>simulation holds for the unwary.

Well, I'm actually doing *both* in an attempt to get back up to speed
again following a 2-decade lapse where I went on to study the
peculiarities of the universe(s) we inhabit. Things have moved on
quite a bit in 20 years. For example, the other day I ordered - for
experimental purposes along with a bunch of other stuff - an RF
amplifier driver IC from a well known supplier. I'd expected something
to come back about the size of the good old 555 timer, but the
static-proof bag labeled appropriately for this device turned out to
be empty - or so I thought. I was about to phone the supplier to
report the short-order, but thought I'd better double check just in
case. Anyway, I could feel *something* in the bag and eventually out
popped a fragment of plastic about 3mm square. But it just looked like
a corner cut off a wrapper and no way resembled an IC. However, a
friend of mine with better close-up vision was able to see there was
something resembling a tiny insect inside it. I placed it under one of
my microscopes and was astonished to see a minute IC within this tiny
chip of protective plastic wrapping. However, there was no way I could
get it out of this wrapper with my big, clumsy fingers, plus the
finest tip on my soldering iron would have bridged across all 6 pins
on one side of it, anyway. It didn't matter much, though, because on
trying to remove it from the 'scope, I dropped it somewhere on the
carpet and despite a lengthy search, was unable ever to find it again!
Thank God it only cost $5! But what on earth is the point of making
things so tiny that people like myself can barely see them, let alone
make practical use of them? In a few more years, event the most
dexterous of us are going to be stuffed if things carry on the way
they're going.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

339. Re: Johnson Fleetcom II UHF help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 16:55:13 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E22EF71.C467ACB3@crosslink.net>
Source record: 38631
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Brent wrote:
>
> I have a Johnson Fleetcom II UHF mobile I believe it is set up for 448.750 I
> want to move it to different repeater which is 443.975 can anyone tell me
> what crystals I will need to order and where I should order them from? Any
> help is greatly appreciated.
>
> Thanks,
> Brent N9BC
> email: brent AT criers.org
>
> For the spam crawlers
> root@127.0.0.1

Try <http://www.icmfg.com/>

340. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 17:06:01 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <DtDFNLA5HvI+EwSH@jmwa.demon.co.uk>
Source record: 38641
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Mike Monett
<z06hgto001@sneakemail.com> wrote (in <3E22C51F.3B0D@sneakemail.com>)
about 'Limitations of the BC337', on Mon, 13 Jan 2003:

>This was in 1968. Transistors were not very good in those days:)

No doubt those available at MIT included the best ones, though.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

341. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 17:58:12 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E22FE34.34CB@sneakemail.com>
Source record: 38638
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote:
>
> On Thu, 9 Jan 2003 21:19:39 -0000, "John Jardine"
> <john@jjdesigns.fsnet.co.uk> opined thusly:
>
> >That 200kHz will be due to, too high a gain, capacitive loading effects,
> >high source resistance.
>
> I know this is probably a dumb question and I'm going to kick myself
> when I read the answer, but how does a high source
> resistance/impedance influence an amp's frequency response?

An amplifier input has stray capacity to ground that forms a RC network with the source resistance. This rolls off the high frequency response.

If the input stage inverts, as in common-emitter amplifiers, the capacitance from base to collector is magnified by the stage gain and appears in series with the source resistance. This is called Miller effect, and can cause severe rolloff.

Mike

342. Re: RF feedback, anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 18:36:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0301131036.594deffc@posting.google.com>
Source record: 38639
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

If you mean that "fed back...to the tx" simply means that it goes to
the antenna (or the antenna changeover relay), and not into some
active stage in the tx, then yes...a qualified yes anyway. To get
you thinking more about it, what could go wrong with this scheme?
What sort of isolation is needed between the amplifier's output and
its input? What sort of "wire" should you use in the cable to get
this isolation? What should you do on the tx end to ensure that the
isolation is maintained? If the tx has amplifier stages, should you
be careful about isolation from the linear's output to the inputs of
those stages? Just _how_ does shielding work, and what will screw up
shielding that you thought was good? Is there perhaps a better
alternative to routing the amplified signal back to the unit where the
input was generated? ... There are probably some other questions
that are worthwhile here, too.

Cheers,
Tom

Paul Burridge <pb@notthisbit.osiris1.co.uk> wrote in message
news:<6ra12vcdvjgdnnecneqpqohvmu4b90np28@4ax.com>...
> Hi,
>
> Let's say I have a hand-held transmitter operating on 40Mhz. I take a
> 'sample' signal from it and feed it via a 6 foot cable to a separate
> low power linear amplifier. It's then fed back via a different wire in
> the same cable to the tx for transmission from the tx's antenna. Let's
> say the 'sample' RF is 2v peak-peak and the return, amplified signal
> is 20v p-p. Can I get away with this or am I likely to have problems
> with feedback owing to the wires being in such close proximity? Would
> using shielding on one or both of the wires help if this set-up is
> likely to cause problems?
>
> p.

343. Re: Motorola Frequency Synthesis ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 18:40:49 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E2308C6.8728825B@alma.demon.co.uk>
Source record: 38640
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Gary Morton wrote:
>
> Does anyone know a source in the UK, or a source in the US who is
> prepared to ship to the UK, any of the Motorola frequency synthesis ICs
> of the types:-
>
> MC145145
> MC145146
> MC145149
> MC145151
> MC145152
> MC145144
> MC145156
> MC145157
> MC145158
> MC145159
>
...deleted...
>
> I have searched the web and UK suppliers and found only a couple of the
> parts. I got the impression that these parts might be used in CB radios,
> so possibly a CB repair shop might stock them???
>
> Can anyone help?
>
> thanks...
>
> --Gary

I found that www.newark.com in the US had the best selection of these
parts and at excellent prices too - MC145170P @ $5. Unfortunately
minimum order for outside the US is a whopping $250.

--Gary

344. FS: 1000's of TUBES, at very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 19:16:04 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <UfEU9.23824$hE3.1766539@news1.west.cox.net>
Source record: 38642
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Please email w6krc@arrl.net for a detailed list of tubes.

345. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 19:21:02 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <TDKhWNBeGxI+EwSF@jmwa.demon.co.uk>
Source record: 38552
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <pam52vchb6n6gqq81i0davva1vp7ale
0h8@4ax.com>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:

>But what on earth is the point of making
>things so tiny that people like myself can barely see them, let alone
>make practical use of them?

Cell phones.

You do have to read the catalogues very carefully in order to avoid
buying parts that you can't handle.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

346. Re: RF feedback, anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 20:01:58 UTC
From: Arthur Jernberg <stubby@comcast.net>
Message-ID: <W-ScnT4Oqbuohr6jXTWcrg@comcast.com>
Source record: 38548
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

What are the design parametes of the transmitter's output stage?? If it is designed to function at 2 watt max and you apply 10 times that amount of signal to what may happen?/ The linear amp is designed be connected to the antenae with the input from the transmitter as it exciter signal generator.
"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message news:6ra12vcdvjgdnnecneqpqohvmu4b90np28@4ax.com...
>
> Hi,
>
> Let's say I have a hand-held transmitter operating on 40Mhz. I take a
> 'sample' signal from it and feed it via a 6 foot cable to a separate
> low power linear amplifier. It's then fed back via a different wire in
> the same cable to the tx for transmission from the tx's antenna. Let's
> say the 'sample' RF is 2v peak-peak and the return, amplified signal
> is 20v p-p. Can I get away with this or am I likely to have problems
> with feedback owing to the wires being in such close proximity? Would
> using shielding on one or both of the wires help if this set-up is
> likely to cause problems?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

347. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 20:07:22 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <wgFU9.1081$iX6.9191@newsfep4-win.server.ntli.net>
Source record: 38549
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message
news:pam52vchb6n6gqq81i0davva1vp7ale0h8@4ax.com...
> On Mon, 13 Jan 2003 13:36:50 +0000, John Woodgate
> <jmw@jmwa.demon.contraspam.yuk> opined thusly:
>
<snip> But what on earth is the point of making
> things so tiny that people like myself can barely see them, let alone
> make practical use of them? In a few more years, event the most
> dexterous of us are going to be stuffed if things carry on the way
> they're going.
>

I am afraid that as long as the machine sees them then it's OK. If we are all stuffed and have to buy new when something breaks then so much the better would be the manufacturer's take on things.

That said you would be amazed at just how small a thing you can hand solder with practice and the right technique. Just don't erect a mental barrier to the concept. I have never regarded my eyesight as being very good but I hand solder the smallest SMD's every day now as a matter of course at work including ultra high density QFP chips.

Just use loads of light and a magnifier for reference. Don't use a magnifying lens to look through for the whole job - bad eyestrain and headaches - just for positioning the component and checking the job from time to time. Binocular magnifiers of the type used by jewellers can be useful since they have two separate lenses they give less eyestrain.

Alec Wood M1BNK
Teesside UK

BTW I find the wife's feet to be the most efficient device for locating IC's hidden in carpet. Just make sure she's not wearing tights - they don't like static

348. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 20:46:41 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <avv8jh029qr@drn.newsguy.com>
Source record: 38551
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John wrote...
>
> Mike Monett wrote ...
>
>> This was in 1968. Transistors were not very good in those days:)
>
> No doubt those available at MIT included the best ones, though.

Hey you two wags, transistors _were_ pretty good by that time!

For example, the 2n2222 suggested in this thread as an improvement
over the BC337 had already been available for what, 5 years?
(One of my friends was involved in its design.) And many other
better transistors were available for RF designs. For example,
remember the 2n918, 1300MHz typ at 4mA - 10V, and 1.25pF at 10V?
I used the 2n918 in 1965 and it was an old part then, IIRC.

I'm sure we can come up with a design matching Dr Searle's circuit
using parts from that era. Let's see, three transistors, 30dB and
100MHz? Hmm, probably a enhanced variant on a shunt-series pair...

Thanks,
- Win

349. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 20:56:31 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <1iI+J$q$fyI+EwE+@fslife.co.uk>
Source record: 38550

Hi Paul,

>>>No need to sub. It's still available. E60 price tag shown here-
>>>http://www.xs4all.nl/~zonderva/dutchtransmitter/nl/dept_13.html
>>I know Daniel and he currently has no stock!
>
>How about an MRF233? It's not a direct substitute but may well do what
>you want, nonetheless.
Have you got the correct number?

The Motorola MRF233 is a 12.5v 15w device while the TP9383 is 28v and
150w!

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

350. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 21:30:50 UTC
From: Frank Bemelman <bemelmanx@euronet.nl.invalid>
Message-ID: <3e23303d$0$57475$1b62eedf@news.euronet.nl>
Source record: 38553
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.contraspam.yuk> schreef in bericht
news:TDKhWNBeGxI+EwSF@jmwa.demon.co.uk...
> I read in sci.electronics.design that Paul Burridge
> <pb@notthisbit.osiris1.co.uk> wrote (in <pam52vchb6n6gqq81i0davva1vp7ale
> 0h8@4ax.com>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:
>
> >But what on earth is the point of making
> >things so tiny that people like myself can barely see them, let alone
> >make practical use of them?
>
> Cell phones.
>
> You do have to read the catalogues very carefully in order to avoid
> buying parts that you can't handle.

Have you noticed that the more important the data is, the smaller
the printing gets? ;)

--
Thanks,
Frank Bemelman
(remove 'x' & .invalid when sending email)

351. microwave trfmr - saturation core removal - how to?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 21:46:56 UTC
From: Matt <matthieub@tareum.freeserve.co.uk>
Message-ID: <avvc7u$dk5$1@news7.svr.pol.co.uk>
Source record: 38554

guys,

I read somewhere it was preferable, if you are to use transformers from microwave ovens (high voltage portion) to remove
some "core" responsible for "sort of" regulating the output voltage regardless of the load. I also read there was an article somewhere talking about from a magazine called "amateur radio" and in particular in the 1998 may issue.

Does anyone know where to find this article? If I am not clear or missing something, please email me directly.

Regards,

Matt - G/F1ILU

352. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 22:17:45 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <xxvJKsBJszI+Ew0D@jmwa.demon.co.uk>
Source record: 38566
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Winfield Hill <whill@picovolt.com>
wrote (in <avv8jh029qr@drn.newsguy.com>) about 'Limitations of the
BC337', on Mon, 13 Jan 2003:
>>
>> Mike Monett wrote ...
>>
>>> This was in 1968. Transistors were not very good in those days:)
>>
>> No doubt those available at MIT included the best ones, though.
>
> Hey you two wags, transistors _were_ pretty good by that time!

I rather assumed that Mike was referring to very high values of 'very
good'. In consumer products, of course, we didn't see anything too
exotic, But I still have a stock of glob-top BC116A, which is something
like a BC 337 but PNP. And of course we had BC107/8/9 - even gain-
grouped ones. I used to charge my lads five virtual shillings if they
wanted to specify a BC109C. Then there were BF194 and 195 for r.f./i.f.
- horrible 'pluggable' encapsulations. But we had FM tuners with RCA
dual-gate FETS.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

353. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 22:37:31 UTC
From: chrishelpfl@aol.com
Message-ID: <1a18886f.0301131437.67001b77@posting.google.com>
Source record: 38555
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
>
> > -------------------- 10v+
> > | |
> > 150k 150k
> > | |______ 100n______Vout~
> > | |
> > | C/
> > ___100n___|____B Q1
> > | | E BC337
> > | | \
> > | 150k |_______
> > Vs~ | | |
> > | | 140k 100n
> > | | | |
> > ------------------------------GND
> >
- Win
```

Hi, the resistors are far too high in value, try these. rc 390, re 100, rb-10v 10k, rb-0v 2.2k.

354. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 22:37:51 UTC
From: garigue <garigue@attbi.com>
Message-ID: <2dHU9.669146$WL3.701581@rwcrnsc54>
Source record: 38556
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hello all ...

I built the SMK that NorCal offered and found that the "larger" SMCs offered a less hassled building experience. I taped down the board , used an eye loupe, a coathanger holddown jig and with forearms resting on the table actually put the thing together and it did work ...much to my amazement. The board did not have to be lifted turned and snipped which was a real plus ...recognized this after building the K2 and tuner. It can be done and be an enjoyment at the same time.

God Bless 73 Tom KI3R Port Vue Pa nr Pittsburgh

355. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 22:42:03 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e23409b.6179793@news.freeserve.net>
Source record: 38557
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 13 Jan 2003 22:30:50 +0100, "Frank Bemelman"
<bemelmanx@euronet.nl.invalid> wrote:

>"John Woodgate" <jmw@jmwa.demon.contraspam.yuk> schreef in bericht
>news:TDKhWNBeGxI+EwSF@jmwa.demon.co.uk...
>> I read in sci.electronics.design that Paul Burridge
>> <pb@notthisbit.osiris1.co.uk> wrote (in <pam52vchb6n6gqq81i0davva1vp7ale
>> 0h8@4ax.com>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:
>>
>> >But what on earth is the point of making
>> >things so tiny that people like myself can barely see them, let alone
>> >make practical use of them?
>>
>> Cell phones.
>>
>> You do have to read the catalogues very carefully in order to avoid
>> buying parts that you can't handle.
>
>Have you noticed that the more important the data is, the smaller
>the printing gets? ;)
>
Ain't that the truth.

356. HP 100ER Freq Std manual WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 23:21:46 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v26igjekamsm56@corp.supernews.com>
Source record: 38558

Anyone have a manual or copy for sale?
tnx
hank wd5jfr

357. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-13 23:38:26 UTC
From: orion.osiris@virgin.net
Message-ID: <4c30c8fc.0301131538.5b24284f@posting.google.com>
Source record: 38559
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett <z06hgto001@sneakemail.com> wrote in message
news:<3E22FE34.34CB@sneakemail.com>...

> An amplifier input has stray capacity to ground that forms a RC network
> with the source resistance. This rolls off the high frequency response.
>
> If the input stage inverts, as in common-emitter amplifiers, the
> capacitance from base to collector is magnified by the stage gain and
> appears in series with the source resistance. This is called Miller
> effect, and can cause severe rolloff.

Thanks, Mike. Elegantly explained and all noted. Miller effect, eh? I'll be
looking into the old textbooks tomorrow for further info on that one!

358. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 00:24:30 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2358BE.1360@sneakemail.com>
Source record: 38560
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:

[...]

> Hey you two wags, transistors _were_ pretty good by that time!
>
> For example, the 2n2222 suggested in this thread as an improvement
> over the BC337 had already been available for what, 5 years?
> (One of my friends was involved in its design.) And many other
> better transistors were available for RF designs. For example,
> remember the 2n918, 1300MHz typ at 4mA - 10V, and 1.25pF at 10V?
> I used the 2n918 in 1965 and it was an old part then, IIRC.

This brings back memories. Of course you are right. The 2N918 was a
pretty hot transistor.

> I'm sure we can come up with a design matching Dr Searle's circuit
> using parts from that era. Let's see, three transistors, 30dB and
> 100MHz? Hmm, probably a enhanced variant on a shunt-series pair...
>
> Thanks,
> - Win

I was kind of hoping you would say that. I'd like to see what a PRB941
could do, and figure out how to get a healthy signal into 50 ohms without
burning up.

IIRC, the feedback resistor required a small cap in parallel for
compensation. This might get tricky at the higher bandwidths.

Mike

359. Re: microwave trfmr - saturation core removal - how to?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 00:35:45 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E24AD5A.1A017CF4@rica.net>
Source record: 38561

Matt wrote:
>
> guys,
>
> I read somewhere it was preferable, if you are to use transformers from
> microwave ovens (high voltage portion) to remove
> some "core" responsible for "sort of" regulating the output voltage
> regardless of the load. I also read there was an article somewhere
> talking about from a magazine called "amateur radio" and in particular in
> the 1998 may issue.
>
> Does anyone know where to find this article? If I am not clear or missing
> something, please email me directly.

Those little blocks of laminations between primary and secondary do
not regulate the voltage. In fact, they make the output voltage more
variable inversely dependent on load current, and are approximately
equivalent to putting an inductor in series with the primary. They
provide a current limit function that is necessary with the negative
resistance characteristic of the magnetron oscillator. If you want to
reuse the primary and wind a low turn count secondary to make a
welder, the shunts are helpful to keep from blowing fuses and burning
windings when the rod sticks.

--
John Popelish

360. List of tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 01:25:53 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E236720.739D49BC@visi.com>
Source record: 38562

Hi Murray,
Please send me your latest list. Thank you.

Bob L.

361. Re: Motorola Frequency Synthesis ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 02:44:17 UTC
From: Peter Bennett <peterbb@interchange.ubc.ca>
Message-ID: <r8u62vci9o6v9jbcs1dvurnd4dolmkrb6d@news.supernews.com>
Source record: 38563
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

On Mon, 13 Jan 2003 18:40:49 GMT, Gary Morton <gary@alma.demon.co.uk>
wrote:

>I found that www.newark.com in the US had the best selection of these
>parts and at excellent prices too - MC145170P @ $5. Unfortunately
>minimum order for outside the US is a whopping $250.
>
>--Gary

If you're in the UK, you might try Farnell - I believe Farnell owns
Newark (or vice-versa). Newark has, on occasion, supplied Farnell
parts to me in Canada.

--
Peter Bennett, VE7CEI
new newsgroup users info : http://vancouver-webpages.com/nnq
GPS and NMEA info: http://vancouver-webpages.com/peter
Vancouver Power Squadron: http://vancouver-webpages.com/van-ps

362. Re: List of tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 03:36:43 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E2385CB.6AB4BEF2@visi.com>
Source record: 38564

Bob Liesenfeld wrote:

> Hi Murray,
> Please send me your latest list. Thank you.
>
>

Sorry.....wrong address.

363. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 05:44:36 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <a5772vglccupntuufh1hq7id6leru5en5h@4ax.com>
Source record: 38565
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 13 Jan 2003 15:41:54 +0000, Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote:

Yes, I hate to think what it's going to be like in 20-30 years time.

But anyway, I have been using SMD devices for about 25years now, on and off, and can offer the following suggestions. This should get you into success with SMD for not much cost, other than your time.

Just start practicing with some old boards, taking a few SMDs on and off. You should be able to get plenty of old boards for free.

I painted my workbench top a light color, so you can see the parts more easily. I also added an alloy strip around the edge about 1/8 inch high. This stops them slipping over the edge onto the floor to vanish into the SMD black hole forever, as you found out.

I made a PCB mounting platform with a sheet of 5x5 inch alloy on a 4 inch "Lazy Susan" bearing (Doh, just realised the PC police will want to castrate me for that Susan bit, so must rush to finish!) The PCB is held on it with a few blobs of "Bluetak" or the like. You can then spin the board around so as to always get the best angle for the soldering iron.

You need a lot of light, a good background light, and, a high-intensity halogen spot on the work.

I work under a large 3 x magnifying glass, but it takes a bit of getting used to, and it usefulness depends on your vision. Another 10 x lens is useful to check joints.

You will need a good temp controlled 25 watt iron with 2-3 small tips, both conical and chisel. A couple of tweezers are essential, I find the ones with long curved tips are the best. I have also coated one pair of tweezer tips with a thin film of RTV, this stops the device from popping out of the tweezers, to vanish forever . Circular components are the most prone to this. Thin solder is also important, I use 15, 20 and 25 thou as required.

Philips, Siemens and probably others have published small booklets containing photographs of good and bad solder joints, and other common SMD faults. These are well worth getting hold of for a bit of study.

Above all, practice practice, then practice some more. You will soon find it's very easy. No leads to clip, no holes to drill.

Best of Luck,
Barry Lennox
>make practical use of them? In a few more years, event the most
>dexterous of us are going to be stuffed if things carry on the way
>they're going.

364. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 06:26:12 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <wo8Z8AAE26I+Ewlj@jmwa.demon.co.uk>
Source record: 38578
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Frank Bemelman
<bemelmanx@euronet.nl.invalid> wrote (in <3e23303d$0$57475$1b62eedf@news
.euronet.nl>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:

>Have you noticed that the more important the data is, the smaller
>the printing gets? ;)

Example of Murphy's Law. Important data is unusual, special or counter-
intuitive, so the catalogue compilers regard it as 'additional' or
'subsidiary', in error, and thus use 3-point type.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

365. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:04:31 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <n8j72v8rop893nj9fsvr4kva5lp1llb6f0@4ax.com>
Source record: 38571
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 13 Jan 2003 19:24:30 -0500, Mike Monett
<z06hgto001@sneakemail.com> opined thusly:

>This brings back memories. Of course you are right. The 2N918 was a
>pretty hot transistor.

Well, thermal transfer compound wasn't very efficient in those days..
;-)
--

"What is now proved was once only imagin'd"
- William Blake, 1793

366. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:04:32 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <fcj72v4iv6tb1eir089e4qpstgb5ivh3ne@4ax.com>
Source record: 38570
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 14 Jan 2003 09:35:51 -0000, "Ian Buckner"
<Ian_Buckner@agilent.com> opined thusly:

>Hi Paul:
>
>You should also look at the behaviour of Ft with collector current. At
>very
>low currents it is inversely proportional to Ic, over some middle
>range it is
>relatively constant, and at higher currents it falls off again. The
>transitions
>between these regions vary a lot depending on device geometry and
>doping.

Many thanks, Ian. Useful tidbits of info like this help me build a
fuller picture of what gives. I knew there was a relationship between
gain and Ic, but not between Ic and Ft. The workings of the BJT at RF
are actually quite complex, it appears. Aren't audio amp designers
lucky?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

367. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:04:33 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <9sj72v4toj1todblc2uen7m86latv336ar@4ax.com>
Source record: 38572
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 13 Jan 2003 20:07:22 -0000, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> opined thusly:

>Just use loads of light and a magnifier for reference. Don't use a
>magnifying lens to look through for the whole job - bad eyestrain and
>headaches - just for positioning the component and checking the job from
>time to time. Binocular magnifiers of the type used by jewellers can be
>useful since they have two separate lenses they give less eyestrain.

I have the very thing. I collect microscopes and a stereoscopic
dissection scope I have lying about somewhere would be absolutely
ideal for this. Now all I need is a *very* steady hand. Now where did
I put that bottle of meths... :-)

>BTW I find the wife's feet to be the most efficient device for locating IC's
>hidden in carpet. Just make sure she's not wearing tights - they don't like
>static

Well, I could have certainly used your wife and her sensitive feet
when this unfortunate loss occurred, however, I'm sure the IC
concerned has long since been inadvertently sucked up in my vacuum
cleaner. :-(

--

"What is now proved was once only imagin'd"
- William Blake, 1793

368. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:05:34 UTC
From: Kevin Aylward <kevin@anasoft.co.uk>
Message-ID: <ApQU9.815$ov1.24529@newsfep1-gui.server.ntli.net>
Source record: 38567
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
> John wrote...

> Hey you two wags, transistors _were_ pretty good by that time!
>
> For example, the 2n2222 suggested in this thread as an improvement
> over the BC337 had already been available for what, 5 years?
> (One of my friends was involved in its design.) And many other
> better transistors were available for RF designs. For example,
> remember the 2n918, 1300MHz typ at 4mA - 10V, and 1.25pF at 10V?
> I used the 2n918 in 1965 and it was an old part then, IIRC.

I doubt it, if you used them in in 1965:-)

Kevin Aylward
sales@anasoft.co.uk
http://www.anasoft.co.uk
SuperSpice, a very affordable Mixed-Mode
Windows Simulator with Schematic Capture,
Waveform Display, FFT's and Filter Design.

369. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:35:51 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1042536953.521590@cswreg.cos.agilent.com>
Source record: 38568
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Paul Burridge" <orion.osiris@virgin.net> wrote in message
news:4c30c8fc.0301131538.5b24284f@posting.google.com...
> Mike Monett <z06hgto001@sneakemail.com> wrote in message
news:<3E22FE34.34CB@sneakemail.com>...
>
> > An amplifier input has stray capacity to ground that forms a RC
network
> > with the source resistance. This rolls off the high frequency
response.
> >
> > If the input stage inverts, as in common-emitter amplifiers, the
> > capacitance from base to collector is magnified by the stage gain
and
> > appears in series with the source resistance. This is called
Miller
> > effect, and can cause severe rolloff.
>
> Thanks, Mike. Elegantly explained and all noted. Miller effect, eh?
I'll be
> looking into the old textbooks tomorrow for further info on that
one!

Hi Paul:

You should also look at the behaviour of Ft with collector current. At
very
low currents it is inversely proportional to Ic, over some middle
range it is
relatively constant, and at higher currents it falls off again. The
transitions
between these regions vary a lot depending on device geometry and
doping.

Regards
Ian

370. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:57:05 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <5nk72vo87jiaihvgm82ihmpkmfelccrafs@4ax.com>
Source record: 38574

On Mon, 13 Jan 2003 20:56:31 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> opined thusly:

>Hi Paul,
>
>>>>No need to sub. It's still available. E60 price tag shown here-
>>>>http://www.xs4all.nl/~zonderva/dutchtransmitter/nl/dept_13.html
>>>I know Daniel and he currently has no stock!
>>
>>How about an MRF233? It's not a direct substitute but may well do what
>>you want, nonetheless.
>Have you got the correct number?
>
>The Motorola MRF233 is a 12.5v 15w device while the TP9383 is 28v and
>150w!

Doh! I'm obviously getting mixed up with something else altogether.
What's the intended frequency of operation for the TP device?

--

"What is now proved was once only imagin'd"
- William Blake, 1793

371. Re: RF feedback, anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:57:09 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <o1n72vg2l8ti0hltu2t3749ej0fsqafvqp@4ax.com>
Source record: 38575
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Okay, thanks, chaps. Some aspects I hadn't considered before. More
careful thought required on my part, it seems.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

372. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 09:57:12 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1042538235.176464@cswreg.cos.agilent.com>
Source record: 38569
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:TDKhWNBeGxI+EwSF@jmwa.demon.co.uk...
> I read in sci.electronics.design that Paul Burridge
> <pb@notthisbit.osiris1.co.uk> wrote (in
<pam52vchb6n6gqq81i0davva1vp7ale
> 0h8@4ax.com>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:
>
> >But what on earth is the point of making
> >things so tiny that people like myself can barely see them, let
alone
> >make practical use of them?
>
> Cell phones.
>
> You do have to read the catalogues very carefully in order to avoid
> buying parts that you can't handle.
> --
> Regards, John Woodgate, OOO - Own Opinions Only.
http://www.jmwa.demon.co.uk
> Interested in professional sound reinforcement and distribution?
Then go to
> http://www.isce.org.uk
> PLEASE do NOT copy news posts to me by E-MAIL!

The small packages also have better parasitics. The down side is
handling them and thermal effects.

Have a look at the Wainwright Mini-Mount stuff. These are self
adhesive
PCB's with most of the common SM footprints, controlled impedance
tracks and the like. Very useful for breadboarding.

Regards
Ian

373. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 11:10:55 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3e23f044$0$18733$626a54ce@news.free.fr>
Source record: 38573
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Frank Bemelman <bemelmanx@euronet.nl.invalid> a &#65533;crit dans le message :
3e23303d$0$57475$1b62eedf@news.euronet.nl...
> "John Woodgate" <jmw@jmwa.demon.contraspam.yuk> schreef in bericht
> news:TDKhWNBeGxI+EwSF@jmwa.demon.co.uk...
> > I read in sci.electronics.design that Paul Burridge
> > <pb@notthisbit.osiris1.co.uk> wrote (in <pam52vchb6n6gqq81i0davva1vp7ale
> > 0h8@4ax.com>) about 'The trouble with SMDs...', on Mon, 13 Jan 2003:
> >
> > >But what on earth is the point of making
> > >things so tiny that people like myself can barely see them, let alone
> > >make practical use of them?
> >
> > Cell phones.
> >
> > You do have to read the catalogues very carefully in order to avoid
> > buying parts that you can't handle.
>
> Have you noticed that the more important the data is, the smaller
> the printing gets? ;)
>

Yep. That's why I can never see on datasheets the really important features
I would like to see : they're too small.

Fred.

> --
> Thanks,
> Frank Bemelman
> (remove 'x' & .invalid when sending email)
>
>
>

374. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 14:28:12 UTC
From: mikea@mikea.ath.cx
Message-ID: <b016ps$ni0$7@puck.litech.org>
Source record: 38576
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In <9sj72v4toj1todblc2uen7m86latv336ar@4ax.com> (rec.radio.amateur.homebrew), Paul Burridge wrote:

> I have the very thing. I collect microscopes and a stereoscopic
> dissection scope I have lying about somewhere would be absolutely
> ideal for this. Now all I need is a *very* steady hand. Now where did
> I put that bottle of meths... :-)

Just buy a pair of micromanipulators from the same place you get
your microscopes. Speaking of which, I love my AO Series 11
Research Trinocular. _Must_ fit a video camera on it.

--
Lots of couples say, "We want a baby."

I never heard one say, "We want a teen-ager."
-- Ruth Moore, private communication

375. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 15:57:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <hSJu9FBQNDJ+EAtq@ifwtech.co.uk>
Source record: 38579
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote:
>a stereoscopic
>dissection scope I have lying about somewhere would be absolutely
>ideal for this. Now all I need is a *very* steady hand. Now where did
>I put that bottle of meths... :-)

Look into the microscope, and there's your steady hand. Or if you want it in engineering terms, our natural hand-eye-brain-hand feedback automatically takes advantage of the extra loop gain from the microscope.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

376. Re: microwave trfmr - saturation core removal - how to?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 17:05:30 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <wkYU9.2080$z66.533589058@news.inreach.com>
Source record: 38577

Matt:

If you have uses in mind besides a welder, you will probably want to remove the shunts. There are a number of on-line references, including: http://www.geocities.com/the_loaded_dog/ham/projects/vk4ye/vk4ye10.html

Considerable force is needed to remove them and you must be careful to avoid damage to the windings. You will almost certainly have to remove the low voltage filament winding (usually a few turns of red or orange insulated wire). You will see the 2 shunts (small stacks of laminated core material) between the HV and primary windings. Then support the core laminations on some substantial material that will keep the windings away from any other objects while you gently (or forcefully) punch out the laminations using a hammer and other suitable tools.

I have found that on some transformers you have to push the two shunts out from opposite sides, and on some transformers they come out from the same side.

Good luck,

Roger K6XQ

377. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 19:09:54 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <C0cV7YACCGJ+Ewro@jmwa.demon.co.uk>
Source record: 38584
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote (in <fcj72v4iv6tb1eir089e4qpstgb5ivh
3ne@4ax.com>) about 'Limitations of the BC337', on Tue, 14 Jan 2003:
>Aren't audio amp designers
>lucky?
No, because the demands have at least kept pace with what can be
achieved, and often have surpassed that.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

378. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 19:31:32 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <dUpSj1AUWGJ+EwrQ@jmwa.demon.co.uk>
Source record: 38585
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Mike Andrews <mikea@mikea.ath.cx>
wrote (in <b016ps$ni0$7@puck.litech.org>) about 'The trouble with
SMDs...', on Tue, 14 Jan 2003

>Lots of couples say, "We want a baby."
>
>I never heard one say, "We want a teen-ager."

You just disclosed a major market for the most unscrupulous genetic
engineers - neotenics.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

379. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 19:43:26 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E2468F4.842B856F@alma.demon.co.uk>
Source record: 38580
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Ian Buckner wrote:

>
> The small packages also have better parasitics. The down side is
> handling them and thermal effects.
>
> Have a look at the Wainwright Mini-Mount stuff. These are self
> adhesive
> PCB's with most of the common SM footprints, controlled impedance
> tracks and the like. Very useful for breadboarding.
>
> Regards
> Ian

Is there an URL for the "Wainwright Mini-Mount" stuff (a Google search was fruitless). Sounds very interesting.

Can you give any idea of cost?

regards...

--Gary

380. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 20:14:19 UTC
From: jean@dancris.com
Message-ID: <ba7a44e5.0301141214.5b1717ec@posting.google.com>
Source record: 38581
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Quite right, Paul. And besides being almost impossible to
work with by hand, the complexity of interconnecting those
ultra-fine pitch devices is making PCB design more and more
difficult every day...

All the best, Jean

www.angelfire.com/wizard/pcb

381. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 20:22:19 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <a8s82v4mbhm15p54mk4r5n9vqeig2dl82s@4ax.com>
Source record: 38582
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 14 Jan 2003 12:14:19 -0800, the renowned jean@dancris.com (Jean Lestrale) wrote:

>Quite right, Paul. And besides being almost impossible to
>work with by hand, the complexity of interconnecting those
>ultra-fine pitch devices is making PCB design more and more
>difficult every day...

How so? The sheer number of pins? The inability to run traces between 0.5mm pitch pins? I don't see much difference, but then I used to be pretty damn good at laying out single-sided PCBs and that, like riding a bicycle, never really leaves you.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

382. Re: Transistor substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 21:18:52 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <fup0aDO86HJ+Ew4C@fslife.co.uk>
Source record: 38583

Hi Paul,

>>The Motorola MRF233 is a 12.5v 15w device while the TP9383 is 28v and
>>150w!
>
>Doh! I'm obviously getting mixed up with something else altogether.
>What's the intended frequency of operation for the TP device?
88-108MHz.

The TP9383 is an ancient TRW device.

As it's the output device in a Rohde & Schwarz FM broadcast transmitter
I cannot put any old 'pill' in there. It would probably cough!

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

383. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 22:50:33 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <i8492vgnh2hnefc8j9p92j3ptq3fblhc27@4ax.com>
Source record: 38586
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 14 Jan 2003 09:04:33 +0000, Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote:

>
>I have the very thing. I collect microscopes and a stereoscopic
>dissection scope I have lying about somewhere would be absolutely
>ideal for this. Now all I need is a *very* steady hand. Now where did
>I put that bottle of meths... :-)

Ah well, you should have told us you collect microscopes! I now use a
stereo zoom microscope, and it is very useful, although I still do
most assembly under a 4.5 inch diameter 3 x lens. I did however, make
a batch of ultra-micro animal tracking beacons under the microscope.
As another poster pointed out, the eye-microscope-brain-hand feedback
loop sorts it all out for you without even thinking about it. Even at
the max 20 x I have no problems with unsteady hands, although about
10 x is more use.

>Well, I could have certainly used your wife and her sensitive feet
>when this unfortunate loss occurred, however, I'm sure the IC
>concerned has long since been inadvertently sucked up in my vacuum
>cleaner. :-(

Every week or two, I put a piece of silk over the end of the vacuum
nozzle and do a "workshop sweep" in the places where the dropped SMDs
tend to gather. I usually get a few, plus some other useful thingies.
Of course, sorting them out often takes more time than it's worth.

Barry Lennox

384. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-14 23:22:02 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E249C32.57A9B941@alma.demon.co.uk>
Source record: 38587
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Gary Morton wrote:

> Is there an URL for the "Wainwright Mini-Mount" stuff (a Google search
> was fruitless). Sounds very interesting.
>
> Can you give any idea of cost?
>
> regards...
>
> --Gary

I tried searching for "Wainwright Solder-Mount" as it is known in the
US. I found several hits.

www.rdi-wainwright.com

I see that costs are relatively high for the hobbiest.

--Gary

385. John Hanson IC-706 Remote Base Controller Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 00:07:01 UTC
From: David Vest <k8dv@fuse.net>
Message-ID: <v299cmshk5ce35@corp.supernews.com>
Source record: 38588

Just finished building up John Hanson's W2FS's 706 Remote Base controller from
article in May 1998 QST using a Basic Stamp 2 as the processor.

Wondering if anyone else has built one of these and what kind of problems did you run
into. I cannot get mine to respond to anything except the initial password and trigger the
link PTT. I have made changes to the program and reloaded the BS/2 several times, but
have had no success.

Looking for any ideas, I have also tried loading John's original code into the BS/2 with no
changes and still have same results. The code can be found on the ARRL BBS ftp file site.

Any help or ideas please email me direct.

Thanks
Dave K8DV
Goshen, Ohio

386. Re: microwave trfmr - saturation core removal - how to?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 00:29:27 UTC
From: Bill Janssen <billj9@citlink.net>
Message-ID: <3E24AB67.537F602C@citlink.net>
Source record: 38589

Roger Leone wrote:

> Matt:
>
> If you have uses in mind besides a welder, you will probably want to remove
> the shunts. There are a number of on-line references, including:
> http://www.geocities.com/the_loaded_dog/ham/projects/vk4ye/vk4ye10.html
>
> Considerable force is needed to remove them and you must be careful to avoid
> damage to the windings. You will almost certainly have to remove the low
> voltage filament winding (usually a few turns of red or orange insulated
> wire). You will see the 2 shunts (small stacks of laminated core material)
> between the HV and primary windings. Then support the core laminations on
> some substantial material that will keep the windings away from any other
> objects while you gently (or forcefully) punch out the laminations using a
> hammer and other suitable tools.
>
> I have found that on some transformers you have to push the two shunts out
> from opposite sides, and on some transformers they come out from the same
> side.
>
> Good luck,
>
> Roger K6XQ

And on the one transformer I checked, the primary didn't have enough turns and
therefore drew too much unloaded current for my use.

If I was to do that again I would use two transformers with the primary in
series
and the secondary in parallel. That would , of course, give only 1/2 of the
rated
voltage you would get with one transformer.

Bill K7NOM

387. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 00:48:30 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E24AFDE.F27A3DF8@mfi.net>
Source record: 38590
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Barry Lennox wrote:
>
> On Tue, 14 Jan 2003 09:04:33 +0000, Paul Burridge
> <pb@notthisbit.osiris1.co.uk> wrote:
>
> >
> >I have the very thing. I collect microscopes and a stereoscopic
> >dissection scope I have lying about somewhere would be absolutely
> >ideal for this. Now all I need is a *very* steady hand. Now where did
> >I put that bottle of meths... :-)
>
> Ah well, you should have told us you collect microscopes! I now use a
> stereo zoom microscope, and it is very useful, although I still do
> most assembly under a 4.5 inch diameter 3 x lens. I did however, make
> a batch of ultra-micro animal tracking beacons under the microscope.
> As another poster pointed out, the eye-microscope-brain-hand feedback
> loop sorts it all out for you without even thinking about it. Even at
> the max 20 x I have no problems with unsteady hands, although about
> 10 x is more use.
>
> >Well, I could have certainly used your wife and her sensitive feet
> >when this unfortunate loss occurred, however, I'm sure the IC
> >concerned has long since been inadvertently sucked up in my vacuum
> >cleaner. :-(
>
> Every week or two, I put a piece of silk over the end of the vacuum
> nozzle and do a "workshop sweep" in the places where the dropped SMDs
> tend to gather. I usually get a few, plus some other useful thingies.
> Of course, sorting them out often takes more time than it's worth.
>
> Barry Lennox

Unless the part has a 35 week leadtime. :)
--

Michael A. Terrell
Central Florida

388. Re: microwave trfmr - saturation core removal - how to?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 00:52:03 UTC
From: Matt <matthieub@tareum.freeserve.co.uk>
Message-ID: <b02bblkro1@news7.svr.pol.co.uk>
Source record: 38591

Thank you everyone for suggestions, comments !!

I knew I got it wrong. I guess now I need to do some testing.

Cheers,

Matt - G/F1ILU

389. FA: Meguro IF Sweepscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 03:51:08 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E24DAAC.A291AA7F@nettally.com>
Source record: 38592
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
>

Link added to specs on Meguro website

> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3107178343&ssPageName=ADME:B:LC:US:1
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.
```

390. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 09:22:26 UTC
From: Paul Burridge <pb@notthisbit.osiris1.co.uk>
Message-ID: <2f9a2v4lqemvhcgb9h6kclrb7dumvvkruu@4ax.com>
Source record: 38593
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 14 Jan 2003 15:57:04 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> opined thusly:

>Look into the microscope, and there's your steady hand. Or if you want
>it in engineering terms, our natural hand-eye-brain-hand feedback
>automatically takes advantage of the extra loop gain from the
>microscope.

Does that apply even before the morning's first Jack Daniels? :-)

--

"What is now proved was once only imagin'd"
- William Blake, 1793

391. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 13:11:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <REBC4vBw3VJ+EAKS@ifwtech.co.uk>
Source record: 38594
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge wrote:
>On Tue, 14 Jan 2003 15:57:04 +0000, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> opined thusly:
>
>
>>Look into the microscope, and there's your steady hand. Or if you want
>>it in engineering terms, our natural hand-eye-brain-hand feedback
>>automatically takes advantage of the extra loop gain from the
>>microscope.
>
>Does that apply even before the morning's first Jack Daniels? :-)
>
Probably not... 'Whisky Before Breakfast' is a great fiddle tune, but
it's no good for fiddling with SMD!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

392. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 15:10:51 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1042643453.448557@cswreg.cos.agilent.com>
Source record: 38595
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3E249C32.57A9B941@alma.demon.co.uk...
> Gary Morton wrote:
>
> > Is there an URL for the "Wainwright Mini-Mount" stuff (a Google
search
> > was fruitless). Sounds very interesting.
> >
> > Can you give any idea of cost?
> >
> > regards...
> >
> > --Gary
>
> I tried searching for "Wainwright Solder-Mount" as it is known in
the
> US. I found several hits.
>
> www.rdi-wainwright.com
>
> I see that costs are relatively high for the hobbiest.
>
> --Gary

http://www.elecdesign.com/Globals/PlanetEE/Content/1706.html
http://www.e-insite.net/ednmag/index.asp?layout=article&articleid=CA78
295
Wainwright Instruments Inc, San Diego, CA
http://www.vallentin.dk/kataloger/wmm-prisliste.pdf

Wessex Electronics in the UK used to stock them, I'm not sure if they
still do.

Regards
Ian

393. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 15:30:29 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E257FB9.3090404@attbi.com>
Source record: 38596
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Ian White, G3SEK wrote:
> Paul Burridge wrote:
>
>> On Tue, 14 Jan 2003 15:57:04 +0000, "Ian White, G3SEK"
>> <G3SEK@ifwtech.co.uk> opined thusly:
>>
>>
>>> Look into the microscope, and there's your steady hand. Or if you want
>>> it in engineering terms, our natural hand-eye-brain-hand feedback
>>> automatically takes advantage of the extra loop gain from the
>>> microscope.
>>
>>
>> Does that apply even before the morning's first Jack Daniels? :-)
>>
> Probably not... 'Whisky Before Breakfast' is a great fiddle tune, but
> it's no good for fiddling with SMD!
>

I used to make custom Jfets for XRF (X ray reflection spectroscopy)
work. The big thing, I found was not to consume any caffine for about
6hrs prior to the work. Other wise I ripped off the 1 mil and smaller
gold wires I used.
Bill Higdon

394. Re: The trouble with SMDs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 16:22:26 UTC
From: jean@dancris.com
Message-ID: <ba7a44e5.0301150822.597b67e4@posting.google.com>
Source record: 38497
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Dear Spehro:

Naturally a fine-pitch device requires more space
around it for vias, etc. and therefore, if component
density stays the same while the number of component
leads rises (due to finer pitch parts...), the area
for interconnect must contain more tracks, and the
routing becomes much more difficult and time-consuming...

As pitches get finer, engineers do not seem to
realize that YES, you can fit more parts on a board,
but you can't just do that without concerning yourself
about how the heck it's going to be interconnected !!

All the best, Jean

395. Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 18:57:44 UTC
From: Tony Messina <T-Rex@ix.netcom.com>
Message-ID: <b04avd$550$1@slb6.atl.mindspring.net>
Source record: 38498

Does anyone know a source for the "old fashioned" log scales that were used on home-brew radios before digital tuning ?? I need one similar to the Miller MD-8 for a project radio I'm working on.

Tony Messina
KD7TOG

396. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-15 21:03:06 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <e0kV9.15959$UB4.72982@news-server.bigpond.net.au>
Source record: 38499

Tony Messina wrote:
> Does anyone know a source for the "old fashioned" log scales that
> were used on home-brew radios before digital tuning ?? I need one
> similar to the Miller MD-8 for a project radio I'm working on.
>
> Tony Messina
> KD7TOG

Jackson Brothers have a unit.
http://www.mainlinegroup.co.uk/jacksonbrothers/4103.htm

Eddystone UK used to manufacture a superb horizontal log scale
drive...
http://www.eddystone-radio.co.uk/

Steve

397. Re: 2m FM rig on CW

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 01:13:11 UTC
From: bjorn890@aol.com57445747
Message-ID: <20030115201311.06313.00000028@mb-fh.aol.com>
Source record: 38500

>If you live here in the states, you'll spend a lot of time CQing at 144.1 !

I get plenty of contacts there. Oh well.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

398. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 02:00:51 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3E26124C.4169AA6D@edge.net>
Source record: 38501

Try www.NationalRF.com and look under "Analog Display Dials".

Bob
K4QQK

Tony Messina wrote:

> Does anyone know a source for the "old fashioned" log scales that were used
> on home-brew radios before digital tuning ?? I need one similar to the
> Miller MD-8 for a project radio I'm working on.
>
> Tony Messina
> KD7TOG

399. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 04:40:52 UTC
From: "s.petry" <s.petry@attbi.com>
Message-ID: <nJqV9.3116$hl1.75@sccrnsc04>
Source record: 38502
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

Op-amps can be used to amplify DC voltage depending on the voltage you want
to amplify and what amplitude you want to amplify it too. Check out op-amp
mfg's such as motorola, maximm, analog devices. They have application notes.
The same circuit can be used to filter out any AC voltage that may be
present.
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

400. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 05:12:20 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b05evk$3kt$1@freenet9.carleton.ca>
Source record: 38503
Cross-posted to: rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

"s.petry" (s.petry@attbi.com) writes:
> Op-amps can be used to amplify DC voltage depending on the voltage you want
> to amplify and what amplitude you want to amplify it too. Check out op-amp
> mfg's such as motorola, maximm, analog devices. They have application notes.
> The same circuit can be used to filter out any AC voltage that may be
> present.

Yes, I think the cross-posting has caused overly complicated answers.
Obviously, DC amplification is pretty common. A lot of the suggestions
have been in the realm of the esoteric, when I'm not sure the
question is at that level. DC offset is easy to remove, you just
null it out with a similar voltage of an opposing polarity. Of
course, at finicky levels, the issue isn't so much the DC offset,
but that temperature instability will make it difficult to
keep that null constant.

As with many questions, the answer follows the application. It
may not require anything more than an op-amp, or it might require
some of the solutions that have been in this thread already.

Michael VE2BVW

> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
>> What do you use to amplify small DC voltages?
>>
>> The trouble with amplifying DC voltage is the interference from DC
>> offsets in the amplifier. While you can use a high-pass filter to
>> remove the DC offset for an amplifier in the audio or higher
>> frequencies, this is not an option for DC, as this would attenuate the
>> DC signal as much as the DC offset.
>>
>> Jason Hsu, AG4DG
>> usenet@@@@@@@@@@@@jasonhsu.com
>
>

401. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 12:04:17 UTC
From: n1jpr@hotmail.com
Message-ID: <95a201e0.0301160404.14fa4092@posting.google.com>
Source record: 38504

Thank you for your hints!

This may be a non-critical design, but there are so many things that can go wrong that experimentally fishing for just two concurrent bugs may take forever...

Frank:
>> In fact a combination of a High Pass - and a Low Pass
This was my thinking too.
Have you ever seen this done in practice?

Pete:
>> put some sort of resistive termination at the antenna end of the filter
I had been wondering abt that.
Rule of thumb, I'd put a resistive load (signal to ground) at least 2-4 times the (supposed) impedance. Does it sound abt. right? Is it needed, in view of the presence of wideband transformers?

Reg:
>> download programs
Thank you, will do!

All:

Do you agree that 800 ohm is a decent ballpark approximation of a short whip impedance?

I should read up A LOT to be able to model it, but I know that Palomar Engineers uses an 800-to-50 ohm matching transformer in its passive whip-to-coax matching device.

Also: I have been looking for a commercial device of this kind. Various shops told me they might have liked a supplier coming up with a small, mag-mount, HF-optimized, 50 ohm out device for in-car listening, and that none was available.

I even talked to makers of active car antennas, who said that making one was no sweat from a manufacturing standpoint. They only would remove the FM BC amp channel and raise the cutoff freq of the AM BC one - cept they would not even consider damping MF.

The tiny market would not even warrant the effort of optimising the choice of a few SMD components onm a production run, esp. since they would have to SELL the contraptions into a market they don't even know.

Do you think any sizable number of hams and SWLs might want to buy a good, clean source of HF spectrum for their cars?

BR

Filippo / N1JPR / SpamLover

402. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 16:23:54 UTC
From: Tony Messina <T-Rex@ix.netcom.com>
Message-ID: <b06maulfl1@slb6.atl.mindspring.net>
Source record: 38505

Thanks, The Jackson brothers evidently were also the original source for the dials sold by Miller !!!

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message news:e0kV9.15959$UB4.72982@news-server.bigpond.net.au...
> Tony Messina wrote:
> > Does anyone know a source for the "old fashioned" log scales that
> > were used on home-brew radios before digital tuning ?? I need one
> > similar to the Miller MD-8 for a project radio I'm working on.
> >
> > Tony Messina
> > KD7TOG
>
> Jackson Brothers have a unit.
> http://www.mainlinegroup.co.uk/jacksonbrothers/4103.htm
>
> Eddystone UK used to manufacture a superb horizontal log scale
> drive...
> http://www.eddystone-radio.co.uk/
>
> Steve
>
>
>
>
>
>
>

403. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 16:32:56 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <waBV9.1209$422.180@newsfep3-gui.server.ntli.net>
Source record: 38506

> Frank:
> >> In fact a combination of a High Pass - and a Low Pass
> This was my thinking too.
> Have you ever seen this done in practice?
=======
I found some practical designs in ARRL Handbook . In 1995 Handbook ref pages
16.15-16-17
Low + highpass sections to be segregated by adequate screening
Home brew filter enclosures can be readily made from fibre glass double
sided PCB.
Final testing and adjustment preferably with aid of spectrum analyser with
tracking generator.

Frank gm0csz.kn6wh@ntlworld.com

404. FA:Nat.choke,var. res.,var. pots...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 17:57:27 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <boCV9.113883$hK4.9258448@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38507

ON EBAY NOW:

National RF choke -175, NOS
75k0 ohm, 50 w variable resistors,NOS
variable pots
12AX7's
Antique Radio tube shields....

See under seller heytubeguy

405. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-16 22:32:20 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <UpGV9.19787$UB4.85499@news-server.bigpond.net.au>
Source record: 38508

Tony Messina wrote:
> Thanks, The Jackson brothers evidently were also the original source
> for the dials sold by Miller !!!
>

If you ever find a source for the Eddystone units, please let me know.
I believe they were sold complete with an enclosure and chassis. Like
a fool, I ditched one a couple of years ago and have been regretting
it ever since :(

> "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
> news:e0kV9.15959$UB4.72982@news-server.bigpond.net.au...
>> Tony Messina wrote:
>>> Does anyone know a source for the "old fashioned" log scales that
>>> were used on home-brew radios before digital tuning ?? I need one
>>> similar to the Miller MD-8 for a project radio I'm working on.
>>>
>>> Tony Messina
>>> KD7TOG
>>
>> Jackson Brothers have a unit.
>> http://www.mainlinegroup.co.uk/jacksonbrothers/4103.htm
>>
>> Eddystone UK used to manufacture a superb horizontal log scale
>> drive...
>> http://www.eddystone-radio.co.uk/
>>
>> Steve

406. Re: RF feedback, anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 00:54:26 UTC
From: jmosborne@charter.net
Message-ID: <58e6aaf.0301161654.112c0296@posting.google.com>
Source record: 38509
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I'd say place the wires apart using aluminum foil if possible. Using
RF anything is likely. 40MHz is not really that high.

"Arthur Jernberg" <stubby@comcast.net> wrote in message
news:<W-ScnT4Oqbuohr6jXTWcrg@comcast.com>...
> What are the design parametes of the transmitter's output stage?? If it is
> designed to function at 2 watt max and you apply 10 times that amount of
> signal to what may happen?/ The linear amp is designed be connected to the
> antenae with the input from the transmitter as it exciter signal generator.
> "Paul Burridge" <pb@notthisbit.osiris1.co.uk> wrote in message
> news:6ra12vcdvjgdnnecneqpqohvmu4b90np28@4ax.com...
> >
> > Hi,
> >
> > Let's say I have a hand-held transmitter operating on 40Mhz. I take a
> > 'sample' signal from it and feed it via a 6 foot cable to a separate
> > low power linear amplifier. It's then fed back via a different wire in
> > the same cable to the tx for transmission from the tx's antenna. Let's
> > say the 'sample' RF is 2v peak-peak and the return, amplified signal
> > is 20v p-p. Can I get away with this or am I likely to have problems
> > with feedback owing to the wires being in such close proximity? Would
> > using shielding on one or both of the wires help if this set-up is
> > likely to cause problems?
> >
> > p.
> > --
> >
> > "What is now proved was once only imagin'd"
> > - William Blake, 1793

407. FA: Meguro IF Sweepscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 03:29:25 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E277895.CD7EFCB0@nettally.com>
Source record: 38510
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
> Link added to specs on Meguro website
>
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3107178343&ssPageName=ADME:B:LC:US:1
>>
>> --
>> Joe Leikhim K4SAT
>> Jleikhim@nettally.com
>>
>> "Jazz is not dead. It just smells funny." -F.Z.
>>
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.
```

408. Lavoie LA 800, Simpson meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 04:55:37 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v2f36pghdr3d6a@corp.supernews.com>
Source record: 38511

I'm restoring an old Lavoie LA-800 WWV Comparator and the Simpson AVC meter is beyond repair. Simpson plated the magnet with some kind of chrome and its peeling resluting in little pieces lodging between the poles and armature. The meter is for a 2 3/16" round hole but has a square face plate. The meter face is 0 to 15 VDC and on the side in small print is SK 525-18. I don't know the sensitivity of the movement but it connects to the AVC line thru a 560k ohm resistor. I'd sure like to find a replacement, any tips appreciated.
tnx
hank wd5jfr

409. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 08:34:16 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <gsfOS0FIA8J+EA+P@ifwtech.co.uk>
Source record: 38512

Steve Andrew wrote:
>> Thanks, The Jackson brothers evidently were also the original source
>> for the dials sold by Miller !!!
>>
>
>If you ever find a source for the Eddystone units, please let me know.
>I believe they were sold complete with an enclosure and chassis.

Not to my recollection. The Eddystone 898 dials (that number just came out as I typed... how... or why... did I ever remember that?) were sold on their own with a template for marking-out. However, other suppliers did sell some ready-made metalwork for published projects involving the 898.

>Like a fool, I ditched one a couple of years ago and have been
>regretting it ever since :(
>
After about 30 years, I let a very dirty example go at a flea market. The collectors fell upon it like vultures!

For real bravado, a friend once sawed an 898 dial up to convert it into a short slide-rule scale, like the Heath SB300 series which were 'the current look' at the time. With smaller dial-cord pulleys (and after 6 months work to make the 0-500 logging scale read direct in kilocycles... well, roughly, kind of...) it worked just fine - even won RSGB's construction prize!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

410. PRM8010/20 manual on CD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 10:31:22 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e2adb47.2663600@news.freeserve.co.uk>
Source record: 38513

http://www.tc006a8364.pwp.blueyonder.co.uk/forsale.htm

411. OM and Electronique engeenering , micro wawe , ATV , LINKS etc ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 13:35:28 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E2806A0.2070201@wanadoo.fr>
Source record: 38514

ANTENNES (NEC)
http://www.kibria.de
http://www.poynting.co.za/software/snec_detail.shtml
http://www.ifwtech.co.uk/g3sek/
http://www.gsolver.com/thanksas.html
http://members.fortunecity.com/xe1bef/yagi-antennas.htm
http://www.qsl.net/wb6tpu
http:// ftp.netcom.com in /pub/ra/rander/NEC
http://www.dec.tis.net/~richesop/nec/index.html
http://dutettq.et.tudelft.nl/~koen/Nec/index.html

ANTENNES
http://ac6v.com/antprojects.htm
http://www.qsl.net/w9dmk/
http://www.sedan.org/ant.htm

DESIGN CIRCUIT IMPRIME
http://www.matwei.de/
http://www.brive.unilim.fr/valente/
http://www.multipower-fr.com/

PROGRAMMATION ï¿½P et MEMOIRES
http://www.willem.org/
http://oase.uci.kun.nl/~mientki/PIC/PicProg/USB_PicProgrammer_software.htm
http://evil.rain.free.fr/page.html

CALCULATEURS EN LIGNE
http://www-users.cs.york.ac.uk/~fisher/lcfilter/
http://www.chipcenter.com/onlinetools/main.html
http://www.filter-solutions.com
http://www.designers-guide.com
http://www-sci.lib.uci.edu/HSG/RefCalculators.html

OM FRANCAIS
http://www.qsl.net/f2tu/
http://perso.club-internet.fr/f5jtz/pjacquet/technik.htm
http://perso.wanadoo.fr/f5cau/
http://perso.wanadoo.fr/f6crp/
http://f5soh.free.fr/
http://www.f5mi.chez.tiscali.fr/
http://www.qsl.net/f5ruj
http://oernst.f5lvg.free.fr/
http://perso.club-internet.fr/f5jtz/
http://f4jrc.free.fr/
http://perso.club-internet.fr/equasim/
http://f3wm.free.fr/

http://www.f1te.org/
http://perso.wanadoo.fr/rs-rey/electronic_ressources/fr_index.htm
http://f1rfm.free.fr/
http://perso.wanadoo.fr/f1nqp/technique.html
http://f1gby.online.fr/
http://www.cfrr.org/

DESIGN DECAMETRIQUE ET DIVERS
http://www.qfilter.com/
http://www.ai.com/receivers/
http://users.aol.com/maxfro/
http://www.qsl.net/yo5ofh/projects/ham%20radio%20projects.htm
http://www.wa4dsy.net/cgi-bin/idbpf
http://www.qsl.net/om3cph/om3cph.html
http://mywebpages.comcast.net/kd9jq/
http://www.g4gxo.cwc.net/index.htm
http://www.bnhof.de/~dl6nci/
http://mywebpages.comcast.net/kd9jq/hamradio/kd9jq.html
http://www.dl5neg.de/
http://www.db6nt.de
http://www.qsl.net/ae4gx/DDS_Sierra.htm
http://www.qsl.net/n9zia/

ELECTRONIQUE
http://c.combaret.free.fr/
http://perso.wanadoo.fr/xcotton/electron/index.htm
http://www.qsl.net/wd1v/scopefaq/index.html
http://www.e-insite.net/ednmag/
http://www.geocities.com/hagtronics/
http://www.chez.com/gdaquino/index1.html
http://www.msbdesign.co.uk/software.html
http://www.elektroda.pl/
http://perso.wanadoo.fr/electrocean/Sommaire.htm
http://www.aurelienr.com/index.htm
http://mywebpages.comcast.net/tonne
http://kudelsko.free.fr/
http://membres.lycos.fr/rpoint/

FOURNISSEURS ELECTRONIQUES ET OM
http://perso.wanadoo.fr/electropuces/
http://pageperso.aol.fr/MwET/Principale.html
http://www.e44.com
http://www.spkecl.com/htdoc/IC.htm
http://www.ukw-berichte.de/index.html
http://www.aborcas.com/
http://www.xs4all.nl/~barendh/Indexeng.htm
http://www.hdcom.com/vco.html
http://www.toko.com/passives/inductors/variable_molded_coils/index.html
http://www.electronique-diffusion.fr/Accueil/Presentation/Gentilly/Mesure/Analyseur/body_analyseur.html
http://www.johnsoncomp.com

http://www.cif.fr/
http://www.scharal.fr.st/
http://www.giga-tech.de
http://www.infracom-france.com/
https://web1.ibcfrance.fr/
http://www.arquie.fr/
http://www.sardif.com/

2.4 GHZ RESEAUX WIFI
http://reseaucitoyen.be/index.php?SlottedWaveGuide2
http://ddx.deine.net/cgi-bin/index.cgi
http://www.wifi-vitry.net/
http://www.hflan.com/
http://www.paris-sansfil.net/
http://perso.wanadoo.fr/cherchetout/index.html
http://www.wireless-fr.org/

MICRO ONDE - HYPER
http://aces.ee.olemiss.edu/
http://www.maxim-ic.com/appnotes10.cfm/
http://maxwell.uwaterloo.ca/~myu/course770.htm
http://www.emct.com/
http://perso.wanadoo.fr/f5aye/
http://dpmc.unige.ch/hyper/
http://www.ohiomicrowave.com/
http://www.mwjournal.com/
http://www.mwrf.com/htmlarchive.html

EN COURS DE TRI
http://webook.fset.de/20091999PHCHO/ELECTROPLUS1.html
http://www.telsud.com/
http://www.telesatellite.com/ oï¿½ je bosse &..
http://www.boulder.nist.gov/timefreq/stations/wwv.html
http://www.universal-radio.com/catalog/cable/coax.html

APPAREILS DE MESURE FAIT MAISON
http://www.hellocq.net/~bg4agr/data/manuals/mfj259b.pdf
http://imogen.princeton.edu/mintweb/instrument/backend/channelizer/references/
http://home.nordnet.fr/~fthobois/
http://www.circuitcellar.com/PSOC2002/winners/3.htm
http://www.nitehawk.com/rasmit/sa50.html
http://www.geocities.com/robert_lacoste/previous_designs.htm
http://www.ksky.ne.jp/~t-kato/hamf/mymes/2tgen.html
http://www.geocities.com/jordan30bg/TrackingGenerator.htm

FILTRES
http://www.circuitsage.com/filter.html
http://www.euroquartz.co.uk/eqzfilters.htm

DESIGN DECA
http://digilander.libero.it/ik3oil/
http://www.rlocman.com.ru/en/

http://www.pollak.sulinet.hu/www/radio.html#pa
http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
http://www.fix.net/~jparker/norcal/iowa10/k8iqynotespart5.htm
http://www.qrp.pops.net/default.htm
http://www.qsl.net/ik4auy/main_menu_eng.htm
http://www.njqrp.org/ham-pic/projects.htm
http://www.njqrp.org/digitalhomebrewing/wb2v_dds_vfo/wb2v_dds_vfo.html

DESIGN DECA DIGITAL
http://hamradio.online.ru/sch_eng.html
http://groups.yahoo.com/group/CDG2000
http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
http://www.g4gxo.cwc.net/new_page_2.htm
http://warc.org.uk/cdg2000 files/release1/CDG2000.htm
ENGENEERING HF
http://www.ieee.org/portal/index.jsp
http://www.rfengineer.cc/rftools.htm
http://www.repeater-builder.com/pix/figs6.jpg
http://bama.sbc.edu/gr.htm
http://www.rfcafe.com/
http://tools.rfdude.com
http://rf.rfglobalnet.com/
http://www.engineers-international.com/freeshare.html
http://www.eng-tips.com/

ASSOCIATIONS ET RADIO CLUBS
http://f6keh.free.fr/f6keh%20ressources/menu_f.htm
http://licencera.free.fr/
http://www.insa-lyon.fr/Associations/RadioClub/
http://www.ham-radio.com/
http://www.arv84.fr.st/

ATV
http://www.mobicomm.net/
http://www.chez.com/f5kes/tx23.htm
http://www.ussc.com/~uarc/utah_atv/utah_atv.html
http://www.qsl.net/stg/intro.html
http://web.tiscali.it/no-redirect-tiscali/ik8uif/
http://f8byc.free.fr
http://www.chez.com/f6kio/index.html
http://membres.lycos.fr/f5sfu/
http://f5lgj.chez.tiscali.fr/
http://f5ad.free.fr/
http://perso.wanadoo.fr/f4bxl/F4BXL_DESIGN.htm
http://perso.wanadoo.fr/jf.fourcadier/
http://F3YX.FREE.FR
http://perso.club-internet.fr/houssinj/
http://perso.wanadoo.fr/loicmarty/index.htm
http://perso.wanadoo.fr/jacques.legoff/
http://anta.asso.fr/
http://www.von-info.ch/hb9afo

TRADUCTEURS ET MOTEURS DE RECHERCHE
http://tr.voila.fr/
http://babelfish.altavista.com/
http://www.excite.co.jp/
http://www.babylon.com
http://www.google.fr
http://www.reverso.net/textonly/default.asp

DIAGRAMME DE SMITH
http://www.noblepub.com/
http://www.systems.caltech.edu/EE/Faculty/rutledge/puff.html
http://sss-mag.com/smith.html

412. Re: Log Scale Dials ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 13:50:14 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <B1WdnX16bYIDjLWjXTWcqA@comcast.com>
Source record: 38515

You can always make your own with MSPowerPoint.

"Tony Messina" <T-Rex@ix.netcom.com> wrote in message
news:b04avd$550$1@slb6.atl.mindspring.net...
> Does anyone know a source for the "old fashioned" log scales that were
used
> on home-brew radios before digital tuning ?? I need one similar to the
> Miller MD-8 for a project radio I'm working on.
>
> Tony Messina
> KD7TOG
>
>

413. Motorola GP2000 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 17:18:09 UTC
From: valleymedic@charter.net
Message-ID: <reeg2v8njekhc342holf1d8eis0a1s2mk2@4ax.com>
Source record: 38516

Just bought a UHF GP2000 front panel programmable...sweet
little radio I might add. Anyway, got 2 features I can't figure out.
How to get the display to show chan tag, and how to acess the other 2
scanlists. I know the obvious anwser is to call motorola, but my local
dealer is a real butthole. I know someone else out there has one of
these radios with the same qusetions. Let me know

John, Paramedic in WV

414. CI-V interface help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 18:40:31 UTC
From: "Pat St. Jean" <stjeanp@pat-st-jean.com>
Message-ID: <z6YV9.715606$WL3.730143@rwcrnsc54>
Source record: 38517

Hi!
I was wondering if I could tap the collective wisdom for a little help assembling a CI-V interface. I ordered the board from FAR Curcuits and I guess I was a little naive. At the hamfests that I've been to they've had these nice little baggies with the board, a schematic, and a parts list. Well, this time I've got a board and nothing else. It mentions figure 22.80 out of the 2000 ARRL Handbook. So I went searching and can't find that on line.
I did find a schematic, but it doesn't match the traces on the board. So, I was wondering if anyone would mind scanning the relavent pages so that I can get this darned thing put together. :) I'm heading out to the used book stores to look for a copy myself, and if that doesn't pan out I'm going to try to order one. I just hope they haven't changed anything since then...

Thanks in advance!
Pat, K0OOK

--
Pat in Lewisville K0OOK '97 XLH 883 (Rocinante)
BS#140 EKIII rides with me
http://www.pat-st-jean.com/stjeanp All things Pat
http://www.pat-st-jean.com/products.html Software for paper money collectors

415. Re: CI-V interface help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 23:03:25 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <b0bko8$h1f$1@newsg1.svr.pol.co.uk>
Source record: 38528

"Pat St. Jean" <stjeanp@pat-st-jean.com> wrote in message
news:z6YV9.715606$WL3.730143@rwcrnsc54...
> Hi!
> I was wondering if I could tap the collective wisdom for a little help
> assembling a CI-V interface. I ordered the board from FAR Curcuits and
> I guess I was a little naive. At the hamfests that I've been to they've
> had these nice little baggies with the board, a schematic, and a parts
> list. Well, this time I've got a board and nothing else. It mentions
> figure 22.80 out of the 2000 ARRL Handbook. So I went searching and
> can't find that on line.
> I did find a schematic, but it doesn't match the traces on the board.
> So, I was wondering if anyone would mind scanning the relavent pages so
> that I can get this darned thing put together. :) I'm heading out to
> the used book stores to look for a copy myself, and if that doesn't pan
> out I'm going to try to order one. I just hope they haven't changed
> anything since then...
>

It's in my 2001 Handbook on page 22.45. There's a PCB template and layout on
page 30.62. I don't have a scanner, but I often
use my digital camera as a scanner, and can email the images.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

416. Re: Lavoie LA 800, Simpson meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-17 23:18:33 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v2h3rd4ijj7s6a@corp.supernews.com>
Source record: 38518

The stuck meter measures 1840 ohms on my Fluke 87...
I put the Fluke in series and read about 3 micro amps..
Using the Fluke as a voltmeter I saw about 2 volts..
The meter is very similar in appearnce and size to the S meter used in
Collins S-lines.

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v2f36pghdr3d6a@corp.supernews.com...
> I'm restoring an old Lavoie LA-800 WWV Comparator and the Simpson AVC
meter
> is beyond repair. Simpson plated the magnet with some kind of chrome and
> its peeling resluting in little pieces lodging between the poles and
> armature. The meter is for a 2 3/16" round hole but has a square face
> plate. The meter face is 0 to 15 VDC and on the side in small print is SK
> 525-18. I don't know the sensitivity of the movement but it connects to
the
> AVC line thru a 560k ohm resistor. I'd sure like to find a replacement,
any
> tips appreciated.
> tnx
> hank wd5jfr
>
>

417. Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 00:44:29 UTC
From: e_2the_x@yahoo.com
Message-ID: <88981065.0301171644.ac9aa67@posting.google.com>
Source record: 38519
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

My RS-12A power supply died after a lightening strike in Summer 2001.
It's been on the shelf since but I am considering repairing it.

Symptons are: when power is applied, the power light comes on and I
hear the hum of the transformer, but there is no dc on the terminals.
Should I start by replacing the two transitors (2N3771)?

I would appreciate help/advice from anyone on how to trouble shoot
this.

Thanks in advance,

Woods

418. Charleston SC Hamfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 01:07:23 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0301171707.3c3c3bbf@posting.google.com>
Source record: 38520

Can anyone comment on the size and "quality" of this hamfest. I'm wondering if its worth a long drive.

Gary
W4AF

419. Re: Charleston SC Hamfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 02:08:42 UTC
From: wb4una@aol.com
Message-ID: <20030117210842.02261.00000029@mb-bk.aol.com>
Source record: 38521

>
>Can anyone comment on the size and "quality" of this hamfest. I'm
>wondering if its worth a long drive.
>
>Gary
>W

If I was going to make along drive I would go to Jackson Mississippi..It is a real nice hamfest..I am in Columbia,sc and that is where I am heading.... Charleston is real small....maybe 200 people....

420. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 02:32:34 UTC
From: foxinsilver@163.net
Message-ID: <2775af5e.0301171832.29b02737@posting.google.com>
Source record: 38522
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0301120757.33d3f4bc@posting.google.com>...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@jasonhsu.com
Hi,if you only want to remove DC ,why not try a cap?You can connect it at your amplifier`s output in seria.

421. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 02:36:27 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <b_2W9.38463$Jm2.20987@news.bellsouth.net>
Source record: 38523
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

Try http://bama.sbc.edu/ under Astron for a copy of the schematic.

Hope this is of help.

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Woods Wannamaker" <e_2the_x@yahoo.com> wrote in message
news:88981065.0301171644.ac9aa67@posting.google.com...
> My RS-12A power supply died after a lightening strike in Summer 2001.
> It's been on the shelf since but I am considering repairing it.
>
> Symptons are: when power is applied, the power light comes on and I
> hear the hum of the transformer, but there is no dc on the terminals.
> Should I start by replacing the two transitors (2N3771)?
>
> I would appreciate help/advice from anyone on how to trouble shoot
> this.
>
> Thanks in advance,
>
> Woods

422. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 05:17:38 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e28e369@news.netacc.net>
Source record: 38524
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:b_2W9.38463$Jm2.20987@news.bellsouth.net...
> Try http://bama.sbc.edu/ under Astron for a copy of the schematic.
>
Excellent resource! Thanks Chuck.

You probably want to disconnect the output leads of the transformer and check the transformer. If it
is good AC output, then it is probably economical to repair.

Steve

423. FA: Meguro IF Sweepscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 07:02:26 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E28FC02.6789B0CF@nettally.com>
Source record: 38525
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
>> Link added to specs on Meguro website
>>
>> >
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3107178343&ssPageName=ADME:B:LC:US:1
>> >
>> > --
>> > Joe Leikhim K4SAT
>> > Jleikhim@nettally.com
>> >
>> > "Jazz is not dead. It just smells funny." -F.Z.
>> >
>>
>> --
>> Joe Leikhim K4SAT
>> Jleikhim@nettally.com
>>
>> "Jazz is not dead. It just smells funny." -F.Z.
>>
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.
```

424. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 08:10:59 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <wT8W9.2300$IA3.588580898@news.inreach.com>
Source record: 38526
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

Woods:

Power supplies like yours are pretty easy to repair, but the best way is not to randomly replace parts. There are many possible problems and you need to approach the troubleshooting in an organized way, eliminating what is working and moving on to what isn't. You will need a volt/ohmmeter for this work.

Here is a link to a schematic that works:
http://www.repeater-builder.com/rbtip/rs12a.html

As a previous poster suggested, check to see if you have AC coming out of the transformer. If you don't, check the fuse and switch on the primary side. If they are good and you still have no AC out of the transformer, and all the wiring seems OK and you have 117 volts AC going in the primary, then the transformer may have an open secondary winding. This is unlikely, but you should check to be sure. If the transformer is bad, you need to decide how badly you want to repair the supply, as that is the most expensive part.

If you have AC coming out of the transformer, then check to see if you have DC on the filter cap(s). It should be in the 16 - 22 volt range on the 17,000 mfd cap and even higher on the 1000 mfd cap. If you don't find these two voltages, you probably have blown diodes. Check all 4 of them with an ohmeter..two are separate and two are molded in a single module. If bad they will either read as open or shorted with the ohmmeter leads on either way. If good, they will conduct one way but not the other. They are relatively inexpensive to replace if they are bad.

If the diodes are good and you have DC on your filter caps, then your regulator chip, driver or output transistor(s) are bad. You can check the transistors with your ohmmeter, like the diodes, looking for opens or shorts. It is a little more complicated and can be confusing because of the extra terminals. The chip isn't as easy to test so if you have satisfied yourself that tall the other parts are OK, then try subsitituing a chip. The 723 regulator chip is very common and you should have no trouble finding one to use.

If I had to make a guess, I would bet the regulator chip is bad. It is the most fragile part and is easy to destroy (don't ask me how I know this).

Good luck,

Roger K6XQ

425. 10.7MHz video demodulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 10:35:59 UTC
From: Martin Peters <martin.peters@ntlworld.com>
Message-ID: <U7aW9.1072$HE2.68861@newsfep1-win.server.ntli.net>
Source record: 38527

Greetings all,

Anyone have a circuit, or ideas, for a simple, no-frills video demodulator to hang off the back of my ICR8500 receiver? The IF out is centreed on 10.7MHz.

Any ideas welcome.

Thanks - Martin

426. Re: CI-V interface help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 14:49:51 UTC
From: Richard Heindel <rheindel@surfbest.net>
Message-ID: <3e29698a$1@news.pghmail.com>
Source record: 38529

It's in the 1995 handbook on page 22.50, no template though.

73 Richard WB8KRN

427. Re: 10.7MHz video demodulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 14:54:48 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0301180654.12b7a26d@posting.google.com>
Source record: 38530

Hi Martin,

Tell me more about the type of video (fast scan, slow scan), bandwidth etc.

Type of modulation, FM, AM, etc.

IF bandwidth of your RX.

Mark.

"Martin Peters" <martin.peters@ntlworld.com> wrote in message
>
> Anyone have a circuit, or ideas, for a simple, no-frills video demodulator
> to hang off the back of my ICR8500 receiver? The IF out is centreed on
> 10.7MHz.
>

428. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 15:17:50 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <VheW9.3041$te4.517384@newsfep2-win.server.ntli.net>
Source record: 38531
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

"> My RS-12A power supply died after a lightening strike in Summer 2001.
> It's been on the shelf since but I am considering repairing it.
>
> Symptons are: when power is applied, the power light comes on and I
> hear the hum of the transformer, but there is no dc on the terminals.
> Should I start by replacing the two transitors (2N3771)?
>
> I would appreciate help/advice from anyone on how to trouble shoot
> this.
==========
Suggest you take it step by step.
First apply power (presumably 117 V) and check AC output of secondary (Low Voltage) transformer winding .
With the winding output (if OK) probably between 18 and 24 V, load the winding with 2 car head light bulbs in series and check voltage on this load . If voltage is hardly any lower than without load , then transformer is OK.
Now check output rectifier module or discrete diodes DC voltage . If between 20 - 30 V these are OK
Now you can start checking components on the regulator circuit board ie transistors , perhaps an opamp or voltage control IC or perhaps a separate zener diode and the passive components .
Does the unit have a 'crowbar' over voltage trip circuit with a thyristor and an associated fuse ? If there is a DC fuse ,is it OK or blown ?

Following a lightning strike ,if there is no visible damage ,semiconductors (ICs) are the most likely victims.

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

429. Re: What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 15:50:54 UTC
From: "Klaas van Klaveren"
Message-ID: <qdti2v017dfnadrph5lnj58mtk8r37ju2v@4ax.com>
Source record: 38532

On Thu, 02 Jan 2003 13:48:14 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>In an article found in CQ from late 50's about Hammarlund SP-200 it
>was mentioned to 'do madam Sorensen on the receiver'. But I have
>really no idea to know what it means, only that it is probably Madam
>Sï¿½rensen to use the correct spelling.

To go to "Madam Sï¿½rensen" seems to be an (old) Danish expression for
going to the toilet/bathroom. I'm not sure if I really want to know
what that has to do with a Hammarlund receiver...

Regards,
Klaas.

430. Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 15:59:17 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <j6ui2v0tgue6fviqqo73stpb8odnrn8qlg@4ax.com>
Source record: 38533

I am Replacing the Capacitors in a old tube tester that I bought at a
swap meet. I was wondering if it is ok to replace polarized capacitors
with un polarized, if the values are the same
Edward Lewis KQ6DX
kq6dx@pacbell.net

431. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 16:18:05 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b0bunuqgb1@slb2.atl.mindspring.net>
Source record: 38534
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

I had a similar failure in an RS-12A and it turned out that the voltage was going high enough to trip the built in crowbar circuit.

And, as another poster suggested, it did turn out the be the LM723 voltage regulator IC.

For my troubleshooting, I removed the wire going the the SCR and that disabled the crowbar. After doing that, the rest was easy to fix.

Jim Pennell
N6BIU

432. Toyota/Fujitsu Car Radio ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 16:25:10 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v2ivvd11kpnh77@corp.supernews.com>
Source record: 38535

I just bought a Toyota 1426 car radio called the Fujitsu Ten Limited,
AE-3902 and wonder if anyone can supply the pinouts for the rear. I want to
convert it for use around the house as I believe I'll be able to get more
weak stations than my house radio.
tnx
hank wd5jfr

433. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 17:00:50 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1801031202510001@c-66-176-144-254.se.client2.attbi.com>
Source record: 38536

In article <j6ui2v0tgue6fviqqo73stpb8odnrn8qlg@4ax.com>, Edward Lewis
<kq6dx@pacbell.net> wrote:

> I am Replacing the Capacitors in a old tube tester that I bought at a
> swap meet. I was wondering if it is ok to replace polarized capacitors
> with un polarized, if the values are the same
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

As long as the voltage ratings are the same, you're okay.

Steve WB4CZR

434. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 17:05:49 UTC
From: k9sqg@aol.com
Message-ID: <20030118120549.07619.00000082@mb-mg.aol.com>
Source record: 38537

As is the case with all lightening strike cases, even apparently "good" components should be replaced if they are not too numerous/expensive. I used to service TV sets and it seems that the lightening strike cases always had multiple problems. You'd fix one problem, and it would be back a few weeks later with another. You'd fix that, and then back again. It became impractical to continue the repairs.

435. Re: 10.7MHz video demodulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 17:11:57 UTC
From: Martin Peters <martin.peters@ntlworld.com>
Message-ID: <VYfW9.3188$te4.561235@newsfep2-win.server.ntli.net>
Source record: 38538

>
> Tell me more about the type of video (fast scan, slow scan), bandwidth etc.
>
> Type of modulation, FM, AM, etc.
>
> IF bandwidth of your RX.
>

It's for broadcast TV, bands I, III, IV and V. I'm pretty sure when I say than the bandwidth at 10.7 MHz is of the order of a couple of megs, OK for mono pictures?

Icom sell a TV adapter than takes its feed from the 10.7 tap but it's a)discontinued, which means b)they're like gold dust, and priced accordingly.

One hair-brained scheme I had in mind was to mix the 10.7 with a UHF oscillator (from the guts of a TV modulator?) and let a normal TV do the demod.

Regards - Martin

436. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 17:39:56 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <0kGdnbcW6dadPbSjXTWcpw@ctc.net>
Source record: 38540

> I am Replacing the Capacitors in a old tube tester that I bought at a
> swap meet. I was wondering if it is ok to replace polarized capacitors
> with un polarized, if the values are the same
> Edward Lewis KQ6DX

In many applications the type of capacitor is not too important. For a tube testor about all they will be used for is to filter the power supply. As long as the voltage rating is the same or somewhat greater and the capacitance is the same (you may use more in a power supply filter) you should not have any problems. It is just unusual to find large values of capacitors that are not polarized.

437. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 18:06:41 UTC
From: Jim Shorney <jshorney@inetnebr.spamblock.com>
Message-ID: <3E2997B1.7DCC2F43@inetnebr.spamblock.com>
Source record: 38539
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

Woods Wannamaker wrote:
>
> My RS-12A power supply died after a lightening strike in Summer 2001.
> It's been on the shelf since but I am considering repairing it.

I have one of these I picked up at a hamfest for $15. Same symptoms. I went to RadShack and got a new 723 (less than $1) and popped it in, no problems since. Replace the 723 first, they are cheap and common, and a more cost-effective first step than actual troubleshooting.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

438. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 18:46:44 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E29A238.4000001@attbi.com>
Source record: 38541

I went through this back in the errly 90's with a small hospital, they had lightning strike the main AC feed into the building. Instead of leaving the X-ray system as dead and calling their insurance company. They had the X-ray system fixed, the insurance company would have replaced the X-ray system if they hadn't had it repaired. But as they had it repaired, the insurance company would only pay for the inital repair. After about 3years, and many service calls they finally sprung for a new system.
Bill Higdon
K9SQG wrote:
> As is the case with all lightening strike cases, even apparently "good"
> components should be replaced if they are not too numerous/expensive. I used
> to service TV sets and it seems that the lightening strike cases always had
> multiple problems. You'd fix one problem, and it would be back a few weeks
> later with another. You'd fix that, and then back again. It became
> impractical to continue the repairs.

439. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 19:03:04 UTC
From: W9GB <w9gb@arrl.net>
Message-ID: <IxhW9.727866$WL3.735503@rwcrnsc54>
Source record: 38542

Woods -

Here is a popular article on repairing the Astrons that took a lightning hit
and
hombrewing your own - good theory on how it all works with the 723 regulator
IC

David Metz, WA0AUQ
Regulated Power Supply construction
(or what's Inside your Astron)

http://www.seits.org/features/pwrsup.htm

Schematic for this design
http://www.seits.org/features/pwrsup.gif

This and the Astron schematic and you are off to fixing your unit.
BTW, I have an RS-12 on the bench right now --
another cheap acquisition - 723 first item replaced !

w9gb

"Woods Wannamaker" <e_2the_x@yahoo.com> wrote in message
news:88981065.0301171644.ac9aa67@posting.google.com...
> My RS-12A power supply died after a lightening strike in Summer 2001.
> It's been on the shelf since but I am considering repairing it.
>
> Symptons are: when power is applied, the power light comes on and I
> hear the hum of the transformer, but there is no dc on the terminals.
> Should I start by replacing the two transitors (2N3771)?
>
> I would appreciate help/advice from anyone on how to trouble shoot
> this.
>
> Thanks in advance,
>
> Woods

440. Re: CI-V interface help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 19:17:22 UTC
From: W9GB <w9gb@arrl.net>
Message-ID: <6LhW9.728012$WL3.735878@rwcrnsc54>
Source record: 38543

There are a large number of CI-V interfaces using everything from
transistors to MAX 232 ICs.

First, here is the original Icom CI-V schematic:
http://www.plicht.de/ekki/civ/civ-sch2.html

Here are a few other approaches !

http://www.plicht.de/ekki/civ/civ-p2.html

http://www.g3vgr.co.uk/civ.htm

http://www.qsl.net/ok2wy/projects.htm

Here is the original schematic from the September 1992 QST project
(FAR circuits has a board for this one as well)
http://www.qsl.net/civ_commander/interface.jpg

http://www.plicht.de/ekki/civ/civtoc.html

CI-V Commander software
http://www.qsl.net/civ_commander/

w9gb

"Pat St. Jean" <stjeanp@pat-st-jean.com> wrote in message
news:z6YV9.715606$WL3.730143@rwcrnsc54...
> Hi!
> I was wondering if I could tap the collective wisdom for a little help
> assembling a CI-V interface. I ordered the board from FAR Curcuits and
> I guess I was a little naive. At the hamfests that I've been to they've
> had these nice little baggies with the board, a schematic, and a parts
> list. Well, this time I've got a board and nothing else. It mentions
> figure 22.80 out of the 2000 ARRL Handbook. So I went searching and
> can't find that on line.
> I did find a schematic, but it doesn't match the traces on the board.
> So, I was wondering if anyone would mind scanning the relavent pages so
> that I can get this darned thing put together. :) I'm heading out to
> the used book stores to look for a copy myself, and if that doesn't pan
> out I'm going to try to order one. I just hope they haven't changed
> anything since then...
>
> Thanks in advance!
> Pat, K0OOK
>
> --
> Pat in Lewisville K0OOK '97 XLH 883

(Rocinante)
> BS#140 EKIII rides
with me
> http://www.pat-st-jean.com/stjeanp All things Pat
> http://www.pat-st-jean.com/products.html Software for paper money
collectors

441. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 19:43:57 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0capt0qqo@drn.newsguy.com>
Source record: 38544
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Mike Monett wrote...
>
> Winfield Hill wrote:
>>
>> Mike Monett wrote...
>>>
>>> Do you remember Cam Searle at MIT? He would walk into the
>>> lecture and pull a ball of circuitry from his coat pocket.
>>> He would flatten it out and show everyone it was a 3
>>> transistor amplifier with feedback, built directly over
>>> the schematic. I forget the gain, perhaps 30 dB or so.
>>> The amazing thing it was flat to 100 MHz!
>>>
>>> This was in 1968. Transistors were not very good in those days:)
>>
>> [...]
>>
>> Hey you two wags, transistors _were_ pretty good by that time!
>>
>> For example, the 2n2222 suggested in this thread as an improvement
>> over the BC337 had already been available for what, 5 years?
>> (One of my friends was involved in its design.) And many other
>> better transistors were available for RF designs. For example,
>> remember the 2n918, 1300MHz typ at 4mA - 10V, and 1.25pF at 10V?
>> I used the 2n918 in 1965 and it was an old part then, IIRC.
>
> This brings back memories. Of course you are right. The 2N918 was
> a pretty hot transistor.
>
>> I'm sure we can come up with a design matching Dr Searle's circuit
>> using parts from that era. Let's see, three transistors, 30dB and
>> 100MHz? Hmm, probably a enhanced variant on a shunt-series pair...
>>
>> Thanks,
>> - Win
>
> I was kind of hoping you would say that. I'd like to see what a
> PRB941 could do, and figure out how to get a healthy signal into
> 50 ohms without burning up.
>
> IIRC, the feedback resistor required a small cap in parallel for
> compensation. This might get tricky at the higher bandwidths.
```

Mike, let's not drop this subject. We'll use a new title for the rest
of this thread, Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Thanks,
- Win

442. Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

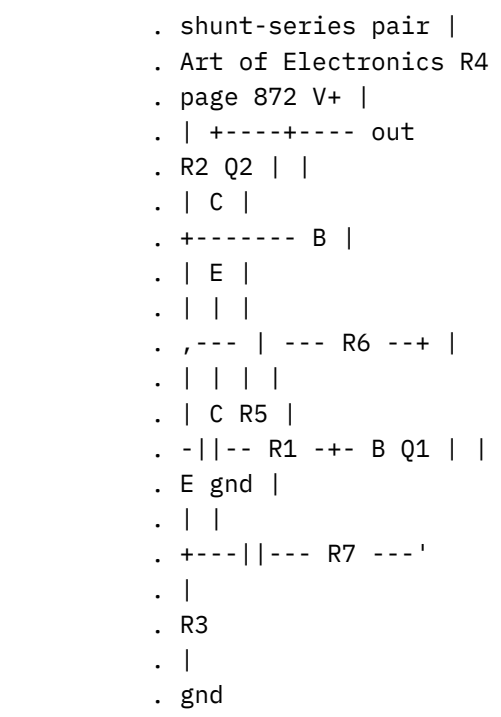
Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 20:07:38 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0cc6a0vpf@drn.newsguy.com>
Source record: 38546
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote...
> Winfield Hill wrote:
>> Mike Monett wrote...
>>>
>>> Do you remember Cam Searle at MIT? He would walk into the
>>> lecture and pull a ball of circuitry from his coat pocket.
>>> He would flatten it out and show everyone it was a 3
>>> transistor amplifier with feedback, built directly over
>>> the schematic. I forget the gain, perhaps 30 dB or so.
>>> The amazing thing it was flat to 100 MHz!
>>>
>>> This was in 1968. Transistors were not very good in those days:)
>>
>> Hey you two wags, transistors _were_ pretty good by that time!
>>
>> For example, the 2n2222 suggested in this thread as an improvement
>> over the BC337 had already been available for what, 5 years?
>> (One of my friends was involved in its design.) And many other
>> better transistors were available for RF designs. For example,
>> remember the 2n918, 1300MHz typ at 4mA - 10V, and 1.25pF at 10V?
>> I used the 2n918 in 1965 and it was an old part then, IIRC.
>
> This brings back memories. Of course you are right. The 2N918 was
> a pretty hot transistor.
>
>> I'm sure we can come up with a design matching Dr Searle's circuit
>> using parts from that era. Let's see, three transistors, 30dB and
>> 100MHz? Hmm, probably a enhanced variant on a shunt-series pair...
>>
>> Thanks,
>> - Win
>
> I was kind of hoping you would say that. I'd like to see what a
> PRB941 could do, and figure out how to get a healthy signal into
> 50 ohms without burning up.
>
> IIRC, the feedback resistor required a small cap in parallel for
> compensation. This might get tricky at the higher bandwidths.

Mike, let's not drop this subject. We'll use a new title for the rest
of this thread, Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

OK, I'll start by posting a simple back-of-the-envelope design. The
drawing below is taken from our book, figure 13.13, where we describe

the operating principle of the amplifier. It has two local emitter-degeneration-feedback gain stages (R2/R3 and R4/R5), plus two more nested two-transistor feedback loops (R6/R1 and R7/R3). Clever, huh?



I first learned of this configuration in the late 60s, it was popular in some circles. Mike, does this look familiar?

Of course it has only two transistors, but with simple calculations using 2n918 parts, I fell just a bit short of the specs. There are several good ways to add a third transistor to the shunt-series pair to enhance its performance. Which is best depends on the answer to an important question, "What's the source impedance, and what's the load?" I'd prefer a low-capacitance scope probe for the latter. :>)

Give it a quick lookover and we'll pick up the thread again.

Thanks,
- Win

443. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 20:11:26 UTC
From: Lou <tech@dp.net>
Message-ID: <b0cg1j$1u01$1@news.dp.net>
Source record: 38545

I had (2) 20 amp Astrons go south on me in a week. Both were the result of a "brown out" due to lights flickering from either a storm or power line problem. Nothing else, not even my "unprotected" computer (which was on at the moment) took a hit. In both cases, it was the Bridge Rectifiers at fault.

--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
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Checks must clear before shipping
"W9GB" <w9gb@arrl.net> wrote in message
news:IxhW9.727866$WL3.735503@rwcrnsc54...
> Woods -
>
> Here is a popular article on repairing the Astrons that took a lightning hit
> and
> hombrewing your own - good theory on how it all works with the 723 regulator
> IC
>
> David Metz, WA0AUQ
> Regulated Power Supply construction
> (or what's Inside your Astron)
>
> http://www.seits.org/features/pwrsup.htm
>
> Schematic for this design
> http://www.seits.org/features/pwrsup.gif
>
> This and the Astron schematic and you are off to fixing your unit.
> BTW, I have an RS-12 on the bench right now --
> another cheap acquisition - 723 first item replaced !

>
> w9gb
>
>
>
> "Woods Wannamaker" <e_2the_x@yahoo.com> wrote in message
> news:88981065.0301171644.ac9aa67@posting.google.com...
> > My RS-12A power supply died after a lightening strike in Summer 2001.
> > It's been on the shelf since but I am considering repairing it.
> >
> > Symptons are: when power is applied, the power light comes on and I
> > hear the hum of the transformer, but there is no dc on the terminals.
> > Should I start by replacing the two transitors (2N3771)?
> >
> > I would appreciate help/advice from anyone on how to trouble shoot
> > this.
> >
> > Thanks in advance,
> >
> > Woods
>
>

444. Re: 10.7MHz video demodulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 21:26:05 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <NDjW9.2066$m47.10792@news-server.bigpond.net.au>
Source record: 38447

Martin Peters wrote:
>> Tell me more about the type of video (fast scan, slow scan),
>> bandwidth etc.
>>
>> Type of modulation, FM, AM, etc.
>>
>> IF bandwidth of your RX.
>>
>
> It's for broadcast TV, bands I, III, IV and V. I'm pretty sure when
I
> say than the bandwidth at 10.7 MHz is of the order of a couple of
> megs, OK for mono pictures?
>
> Icom sell a TV adapter than takes its feed from the 10.7 tap but
it's
> a)discontinued, which means b)they're like gold dust, and priced
> accordingly.
>
> One hair-brained scheme I had in mind was to mix the 10.7 with a UHF
> oscillator (from the guts of a TV modulator?) and let a normal TV do
> the demod.
>
> Regards - Martin

Not so hairbrained at all Martin. It's probably the simplest, quickest and cheapest way of doing it. This link is for a converter for the AR5000, but should work well with your R8500.
http://www.aoruk.com/pdf/5000tv.pdf
Note that your ICOM may superimpose 10-15 volts on the IF output - My ICOM R7000 does. I cannot say what bandwidth your R8500 has at 10.7MHz but my ICOM R7000 bandwidth is around 5-6MHz so you should be able to receive the sound and colour carriers as well.

Also, check this link for other article relating to TV via your radio.
http://www.geocities.com/toddemslie/vhf_dx_articles.html
It includes a couple of articles on filtering as applied to ICOM scanners/receivers, as well as a wealth of info on DX TV reception.

If you need any further info, please feel free to email me.

Steve

445. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-18 23:17:15 UTC
From: Robert Mercer <rdmercer@wavecomputers.net>
Message-ID: <v2jo54o56fs4be@corp.supernews.com>
Source record: 38448
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

Get a book on switching amplifiers.
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> What do you use to amplify small DC voltages?
>
> The trouble with amplifying DC voltage is the interference from DC
> offsets in the amplifier. While you can use a high-pass filter to
> remove the DC offset for an amplifier in the audio or higher
> frequencies, this is not an option for DC, as this would attenuate the
> DC signal as much as the DC offset.
>
> Jason Hsu, AG4DG
> usenet@@@@@@@@@@@@jasonhsu.com

446. Re: 10.7MHz video demodulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 02:23:11 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0301181823.39714063@posting.google.com>
Source record: 38449

Martin,

If you have an IF which is a couple of MHz wide then you should be
able to get Monochrome Video through, it's going to be a bit blurry
for 525 or 625 lines.

I like the idea of mixing it back up to a regular TV frequency - use
as low a TV channel as possible.

If you want to cook it yourself solution look at the MC1330
synchronous demodulator. Old, Simple and Cheap - just like me :)

Mark

"Martin Peters" <martin.peters@ntlworld.com> wrote in message
> >
> > Tell me more about the type of video (fast scan, slow scan), bandwidth
> etc. Type of modulation, FM, AM, etc. IF bandwidth of your RX.
> >
>
> It's for broadcast TV, bands I, III, IV and V. I'm pretty sure when I say
> than the bandwidth at 10.7 MHz is of the order of a couple of megs, OK for
> mono pictures?
>
> Icom sell a TV adapter than takes its feed from the 10.7 tap but it's
> a)discontinued, which means b)they're like gold dust, and priced
> accordingly.
>
> One hair-brained scheme I had in mind was to mix the 10.7 with a UHF
> oscillator (from the guts of a TV modulator?) and let a normal TV do the
> demod.
>
> Regards - Martin

447. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 02:25:13 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2A0C89.7FAB@sneakemail.com>
Source record: 38450
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:

[...]

> Mike, let's not drop this subject. We'll use a new title for the rest
> of this thread, Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier
>
> OK, I'll start by posting a simple back-of-the-envelope design. The
> drawing below is taken from our book, figure 13.13, where we describe
> the operating principle of the amplifier. It has two local emitter-
> degeneration-feedback gain stages (R2/R3 and R4/R5), plus two more
> nested two-transistor feedback loops (R6/R1 and R7/R3). Clever, huh?
>
> . V+
> . shunt-series pair |
> . Art of Electronics R4
> . page 872 V+ |
> . | +----+---- out
> . R2 Q2 | |
> . | C |
> . +------- B |
> . | E |
> . | | |
> . ,--- | --- R6 --+ |
> . | | | |
> . | C R5 |
> . -||-- R1 -+- B Q1 | |
> . E gnd |
> . | |
> . +---||--- R7 ---'
> . |
> . R3
> . |
> . gnd
>
> I first learned of this configuration in the late 60s, it was popular
> in some circles. Mike, does this look familiar?
>
> Of course it has only two transistors, but with simple calculations
> using 2n918 parts, I fell just a bit short of the specs. There are
> several good ways to add a third transistor to the shunt-series pair
> to enhance its performance. Which is best depends on the answer to
> an important question, "What's the source impedance, and what's the
> load?" I'd prefer a low-capacitance scope probe for the latter. :>)

>
> Give it a quick lookover and we'll pick up the thread again.
>
> Thanks,
> - Win

Golly, that sure looks familiar. I can't say for sure as it was such a long time ago, but let's go with it.

As I recall, the input was driven from the 50 ohm source impedance of a network analyzer. I'm not sure, but I think the output drove 50 ohms directly. That might account for the third transistor used as an emitter follower, but I rather see what else you had in mind.

The compensation cap went across R7.

Should there be a bypass cap from the emitter of Q2 to ground? R5 is going to be quite large due to the stacked voltages, which would make R4 really large to obtain much gain. Bandwidth would suffer, and the feedback resistor R7 would start to dominate.

Mike

448. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 03:03:32 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0d4i40o9e@drn.newsguy.com>
Source record: 38451
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Mike wrote...
>
>Winfield Hill wrote:
>
>> OK, I'll start by posting a simple back-of-the-envelope design. The
>> drawing below is taken from our book, figure 13.13, where we describe
>> the operating principle of the amplifier. It has two local emitter-
>> degeneration-feedback gain stages (R2/R3 and R4/R5), plus two more
>> nested two-transistor feedback loops (R6/R1 and R7/R3). Clever, huh?
>>
>>. V+
>>. shunt-series pair |
>>. Art of Electronics R4
>>. page 872 V+ |
>>. | +----+---- out
>>. R2 Q2 | |
>>. | C |
>>. +------- B |
>>. | E |
>>. | | |
>>. ,--- | --- R6 --+ |
>>. | | | |
>>. | C R5 |
>>. -||-- R1 -+- B Q1 | |
>>. E gnd |
>>. | |
>>. +---||--- R7 ---'
>>. |
>>. R3
>>. |
>>. gnd
>>
>
> Golly, that sure looks familiar. I can't say for sure as it was such
> a long time ago, but let's go with it.
>
> As I recall, the input was driven from the 50 ohm source impedance of
> a network analyzer. I'm not sure, but I think the output drove 50 ohms
> directly. That might account for the third transistor used as an
> emitter follower, but I rather see what else you had in mind.

Yes a good possibility, although no voltage gain results.

> The compensation cap went across R7.
```

Hmm. Normally there isn't enough loop gain in the shunt-series pair beasts I've designed to need such a trick.

> Should there be a bypass cap from the emitter of Q2 to ground? R5 is
> going to be quite large due to the stacked voltages, which would make
> R4 really large to obtain much gain. Bandwidth would suffer, and the
> feedback resistor R7 would start to dominate.

Yes, exactly right. Ideally one would share the gain task between the two transistors, but I wasn't able to get the 2nd stage gain up to snuff and a bypass (with a series resistor?) could well solve that. Ah, with no degenerating series resistor for the bypass cap, perhaps a cap across R7 might be needed after all, to add a fortuitous zero in the loop.

Thanks,
- Win

449. Re: What means "Madam Sorensen"?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 03:33:29 UTC
From: la8ak.xnd@online.no
Message-ID: <3e29ac9f.250811889@news.online.no>
Source record: 38452

Thanks for reply,

suppose you wouldn't find so strong means in the toilet, usually you
need isopropanol liquid to clean an old boatanchor...

73,
Jan_Martin
LA8AK (in JO38XC)
N4623-Kristiansand
http://www.laud.no/la6nca/LA8AK/

On Sat, 18 Jan 2003 16:50:54 +0100, Klaas van Klaveren
<kl@b@th@hotm@il.com> wrote:

>On Thu, 02 Jan 2003 13:48:14 GMT, la8ak.xnd@online.no (J M Noeding)
>wrote:
>
>>In an article found in CQ from late 50's about Hammarlund SP-200 it
>>was mentioned to 'do madam Sorensen on the receiver'. But I have
>>really no idea to know what it means, only that it is probably Madam
>>S�rensen to use the correct spelling.
>
>To go to "Madam S�rensen" seems to be an (old) Danish expression for
>going to the toilet/bathroom. I'm not sure if I really want to know
>what that has to do with a Hammarlund receiver...
>
>Regards,
>Klaas.
>

--
remove ,xnd to reply

450. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 07:06:53 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2A4E8D.78BE@sneakemail.com>
Source record: 38453
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
>
> Mike wrote...

[... save space]

> > Golly, that sure looks familiar. I can't say for sure as it was such
> > a long time ago, but let's go with it.
> >
> > As I recall, the input was driven from the 50 ohm source impedance of
> > a network analyzer. I'm not sure, but I think the output drove 50 ohms
> > directly. That might account for the third transistor used as an
> > emitter follower, but I rather see what else you had in mind.
>
> Yes a good possibility, although no voltage gain results.
>
> > The compensation cap went across R7.
>
> Hmm. Normally there isn't enough loop gain in the shunt-series pair
> beasts I've designed to need such a trick.

This may have been due to the layout. There was no attempt to shorten the
leads. Instead, the circuit was wired directly over the schematic, and I
was astonished to see it work, especially at 100MHz.

> > Should there be a bypass cap from the emitter of Q2 to ground? R5 is
> > going to be quite large due to the stacked voltages, which would make
> > R4 really large to obtain much gain. Bandwidth would suffer, and the
> > feedback resistor R7 would start to dominate.
>
> Yes, exactly right. Ideally one would share the gain task between the
> two transistors, but I wasn't able to get the 2nd stage gain up to snuff
> and a bypass (with a series resistor?) could well solve that. Ah, with
> no degenerating series resistor for the bypass cap, perhaps a cap across
> R7 might be needed after all, to add a fortuitous zero in the loop.
>
> Thanks,
> - Win

I tossed this in SPICE using three MMBR941's, the last one as an emitter
follower. After fiddling a bit with the bias, here's my results:

Parameter 1KHz 200MHz

Open Loop Gain 46.14 dB 37.3 dB
Closed Loop Gain 30.50 dB 29.99 dB

Maximum Output 9.11V p-p

No compensation cap was needed, but it definitely needed the 100uF from Q2 emitter to ground.

Now I'd like to see how it really should be done!

Mike

451. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 09:17:27 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0dqf702rtl@drn.newsguy.com>
Source record: 38454
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote...
>
>Winfield Hill wrote:
>>
>> Hmm. Normally there isn't enough loop gain in the shunt-series pair
>> beasts I've designed [using parts like a 2n918] to need such a trick.
>
> This may have been due to the layout. There was no attempt to shorten
> the leads. Instead, the circuit was wired directly over the schematic,
> and I was astonished to see it work, especially at 100MHz.

Actually it gets better not worse. Remember Bob Pease and his classic
rat's nest lashups to test some IC-designs on the bench? It keeps the
capacitance down and I imagine low inductance is a possibility with some
effort at places you really need it.

> I tossed this in SPICE using three MMBR941's, the last one as an emitter
> follower. After fiddling a bit with the bias, here's my results:
>
> Parameter 1KHz 200MHz
>
> Open Loop Gain 46.14 dB 37.3 dB
> Closed Loop Gain 30.50 dB 29.99 dB
>
> Maximum Output 9.11V p-p
>
> No compensation cap was needed, but it definitely needed the 100uF from
> Q2 emitter to ground.

Hmm, pretty nice! That was with a 50-ohm load, right? Did you find
the -3dB down point? Also, what supply voltage did you use, are you
sure each part's Pd was reasonable?

Hmm, did On Semiconductor pick up or continue the '941 after Motorola?
I see APT and Microsemi 2nd-source the part. Philips has the PBR941.

But Mike, the MMBR941 wasn't available in 1968 was it? When did it
come out? I mean, I don't remember any jelly-bean 8GHz transistors
that far back, and having only 0.3pF of capacitance is a big help!

Let's see what we can accomplish with a true vintage component, like
the 2n918, or better if it was available.

> Now I'd like to see how it really should be done!

Nah, your circuit the looks like the winner. But I'll show you my
2n918 circuit if you show me yours. :>)

Thanks,
- Win

452. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 11:05:49 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2A868D.1D0E@sneakemail.com>
Source record: 38455
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
>
> Mike Monett wrote...
> >
> >Winfield Hill wrote:

[...]

> Actually it gets better not worse. Remember Bob Pease and his classic
> rat's nest lashups to test some IC-designs on the bench? It keeps the
> capacitance down and I imagine low inductance is a possibility with some
> effort at places you really need it.

Actually, you are right. I always get parasitic oscillations with fast transistors and long leads, but I guess a couple of nanohenries really isn't going to be a problem up to 100MHz. The reactance is so low compared to the rest of the circuit it won't do much. But I was horrified when I first saw it. This ain't gonna work. But it worked fine.

> > I tossed this in SPICE using three MMBR941's, the last one as an emitter
> > follower. After fiddling a bit with the bias, here's my results:
> >
> > Parameter 1KHz 200MHz
> >
> > Open Loop Gain 46.14 dB 37.3 dB
> > Closed Loop Gain 30.50 dB 29.99 dB
> >
> > Maximum Output 9.11V p-p
> >
> > No compensation cap was needed, but it definitely needed the 100uF from
> > Q2 emitter to ground.
>
> Hmm, pretty nice! That was with a 50-ohm load, right? Did you find
> the -3dB down point? Also, what supply voltage did you use, are you
> sure each part's Pd was reasonable?

The parts were cooking. No load, but I set the bias for max swing just to find the range. Vcc is +15V. The -3dB point is 558MHz.

> Hmm, did On Semiconductor pick up or continue the '941 after Motorola?

I haven't been able to find anything at ONSemi. MaCom supposedly picked up the line but I haven't been able to figure out how to navigate their web site to find out.

> I see APT and Microsemi 2nd-source the part. Philips has the PBR941.

For some strange reason, they offer the PBR957 as the replacement for the MMBR941 instead of the PBR941. They also have some nice high frequency ones in the BFG series. Here's a short list:

P/N GHz
BFG403 17.0
BFG410 22.0
BFG425 25.0
BFG480 21.0

These have a VCEO of 4.5V. I don't know what the base-emitter breakdown is, but it can't be more than the MMBR941 at -1.5V. So power on/off transients could be a problem if there's large caps in the circuit. It may not hurt the device, but I understand all it takes is one event to degrade the noise figure.

> But Mike, the MMBR941 wasn't available in 1968 was it? When did it
> come out? I mean, I don't remember any jelly-bean 8GHz transistors
> that far back, and having only 0.3pF of capacitance is a big help!

True, but the 2N2222 didn't do very well, and I happened to have the model for the MMBR941 already loaded and wanted to see what it could do. In real life, there would be three parasitic oscillations all running happily:)

> Let's see what we can accomplish with a true vintage component, like
> the 2n918, or better if it was available.

Yes, that's a much more difficult task.

> > Now I'd like to see how it really should be done!
>
> Nah, your circuit the looks like the winner. But I'll show you my
> 2n918 circuit if you show me yours. :>)

LOL! I'll upload it tommorow and let you shoot holes in it. But I really want to find out how you can get away without using a bypass cap.

> Thanks,
> - Win

Mike

453. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 11:59:48 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <atwW9.503$eU5.96167@newsfep1-win.server.ntli.net>
Source record: 38456

"Lou" <tech@dp.net> wrote in message news:b0cg1j$1u01$1@news.dp.net...
> I had (2) 20 amp Astrons go south on me in a week. Both were the result of
a
> "brown out" due to lights flickering from either a storm or power line
> problem. Nothing else, not even my "unprotected" computer (which was on at
> the moment) took a hit. In both cases, it was the Bridge Rectifiers at
> fault.
=========
Since the discussion is on Astron Power Supply Units , may I bring up
another subject regarding these units

I have a RS-50A unit , 13.8 V -50Amperes max ., Astron serial nr 8804024.
Although provided with a Yaesu sticker and bought in the UK ,the unit is
made in the USA ,hence it is highly likely that the transformer is
designed for 234V- 60Hz. Here in Europe (incl.Scotland) the AC freq is 50
Hz. and we have fused power lead plugs .
For the Astron unit I fitted a 13 Amp fuse .

I have 2 problems with the unit :
1) When switched on after having been idle for some time the mains circuit
breaker trips due to the high inrush current ,but the 13 Amperes fuse
survives and so does the 10 Amperes fuse ,fitted on the unit.
Cure : I'll fit a 50 Ohms -50 Watts resistor with integral heatsink in
series with the primary transformer winding. As soon as the DC output
voltage is present (with a few seconds time delay) the contact of a DC coil
relay shorts the resistor providing the transformer with the full (nominal)
230 V - 50 Hz AC supply .

2) When switched on the transformer being located close to the metal cabinet
acts as a loud 'hum producing transducer'
I am sure this problem would not exist had the the transformer be a torodial
type.
I now intend putting the PSU in a wooden enclosure ,but before doing that I
would appreciate any feedback regarding the use of the RS-50A in the USA
or other countries with a 60 Hz power supply system.

TIA for any response

Frank gm0csz.kn6wh@ntlworld.com

454. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 12:45:56 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1901030747590001@c-66-176-144-254.se.client2.attbi.com>
Source record: 38457
Cross-posted to:
rec.radio.amateur.homebrew,alt.engineering.electrical,sci.electronics,sci.electronics.design,sci.electronics.components

In article <v2jo54o56fs4be@corp.supernews.com>, "Robert Mercer"
<rdmercer@wavecomputers.net> wrote:

> Get a book on switching amplifiers.
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
> > What do you use to amplify small DC voltages?
> >
> > The trouble with amplifying DC voltage is the interference from DC
> > offsets in the amplifier. While you can use a high-pass filter to
> > remove the DC offset for an amplifier in the audio or higher
> > frequencies, this is not an option for DC, as this would attenuate the
> > DC signal as much as the DC offset.
> >
> > Jason Hsu, AG4DG
> > usenet@@@@@@@@@@@@jasonhsu.com

I've always heard them referred to as chopper stabilized or commutationg
autozero (CAZ for short) amplifiers. There are also some very good amps
out there made by Burr Brown, Intersil, etc which may be applicable. As
much as I hate to advocate it, you can also manually trim each of the
stages with a pot. Many amps even have pins specifically made for this.
You may get stuck using a plus and minus supply also.

Steve Carlton WB4CZR

455. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 13:23:58 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <GnWdncLmnYUdKLejXTWc3g@ctc.net>
Source record: 38459

"> would appreciate any feedback regarding the use of the RS-50A in the
USA
> or other countries with a 60 Hz power supply system.
>
> TIA for any response
>
> Frank gm0csz.kn6wh@ntlworld.com

The power supply transformer will be slightly more efficient at 60 HZ and
the filter capacitors will eliminate somewhat more ripple in the supply.
Overall it should work beter.

456. Re: List of tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 13:38:57 UTC
From: la8ak.xnd@online.no
Message-ID: <3e2a9205.309546737@news.online.no>
Source record: 38458

On Mon, 13 Jan 2003 21:36:43 -0600, Bob Liesenfeld <wb0poq@visi.com>
wrote:

> Sorry.....wrong address.

?
--
remove ,xnd to reply

457. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 14:26:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3e2aad9b.316609136@news.online.no>
Source record: 38460
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 14 Jan 2003 09:04:31 +0000, Paul Burridge
<pb@notthisbit.osiris1.co.uk> wrote:

>>This brings back memories. Of course you are right. The 2N918 was a
>>pretty hot transistor.
>
>Well, thermal transfer compound wasn't very efficient in those days..

Thermal compound was difficult to apply for 2N918 since it is a TO18
device

JM

--
remove ,xnd to reply

458. WTB: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 14:56:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b0ee84$oj4ff$1@ID-150848.news.dfncis.de>
Source record: 38461
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

Seeking these shortform component data pocketbooks from Philips. Wanting the 1960's ones mostly.

Please contact me direct if you have one to sell. Ta.

My email: usual_REMOVEemail@ntlworld.com

Please remove: "REMOVE".

I'm in UK.

Rich.

Please note I have crossposted pretty extensively. But just wanting direct email responses not newsgroup responses.

459. Re: Toyota/Fujitsu Car Radio ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 15:05:51 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v2lfmij5tj41a0@corp.supernews.com>
Source record: 38462

here's a good site:
http://www.installdr.com/QuickWiring.html
for car radio wire diags.
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v2ivvd11kpnh77@corp.supernews.com...
> I just bought a Toyota 1426 car radio called the Fujitsu Ten Limited,
> AE-3902 and wonder if anyone can supply the pinouts for the rear. I want
to
> convert it for use around the house as I believe I'll be able to get more
> weak stations than my house radio.
> tnx
> hank wd5jfr
>
>

460. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 16:37:36 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <kvAW9.6612$8N.829731@news1.east.cox.net>
Source record: 38463

Yes. Especially if you are using mylars. They will outlive
any electrolytic capacitor!

"Edward Lewis" <kq6dx@pacbell.net> wrote in message
news:j6ui2v0tgue6fviqqo73stpb8odnrn8qlg@4ax.com...
> I am Replacing the Capacitors in a old tube tester that I bought at a
> swap meet. I was wondering if it is ok to replace polarized capacitors
> with un polarized, if the values are the same
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

461. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 17:20:10 UTC
From: e_2the_x@yahoo.com
Message-ID: <88981065.0301190920.1ccdeb9@posting.google.com>
Source record: 38464
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

The fuse conducts when checked with the ohmmeter. Voltage going into the transformer is ~120V AC. Voltage across the two wires coming from the secondary (blue and yellow) into the bridge rectifier (BR) is ~38V AC. Voltage across the other side of the BR (yellow and red wires) is ~18V AC. Voltage feeding onto the cirucit board from the BR is 18V. I actually get a reading both AC and DC there. The 16000 and 1000 mfd filter caps have 25 and 32 V DC, respectively. Voltage on the transistors is ~14V DC.

D1 and D2 conduct in one direction but show reflectance in the other. D3 and D4 conduct in both directions (hmmm). Voltage across the D1 and D2 is 32V DC. Voltage across D3 and D4 is nil (even on the most sensitive scale). Does this identify the diodes D3 and D4 as defective? I suppose the LM723 chip could also be defective. How do I determine the correct replacements for D3 and D4, should these be the problem- from the schematic?

Thanks for all the helpful posts and email responses.

Woods

462. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 18:02:05 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2AE81D.73AC@sneakemail.com>
Source record: 38465
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:

[...]

> LOL! I'll upload it tommorow and let you shoot holes in it. But I really
> want to find out how you can get away without using a bypass cap.
>
> > Thanks,
> > - Win
>
> Mike

Here's the SPICE files:

http://www3.sympatico.ca/add.automation/misc/searle.htm

Please be gentle:)

Mike

463. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 18:19:16 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <kqql2vog17466a66mkem57tqjakrb0dvlb@4ax.com>
Source record: 38466
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 19 Jan 2003 13:02:05 -0500,
Mike Monett <z06hgto001@sneakemail.com>,
In Newsgroup: sci.electronics.design,
Article: <3E2AE81D.73AC@sneakemail.com>,
Entitled: "Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie
amplifier",
Wrote the following:

|Mike Monett wrote:
|
|[...]
|
|> LOL! I'll upload it tommorow and let you shoot holes in it. But I really
|> want to find out how you can get away without using a bypass cap.
|>
|> > Thanks,
|> > - Win
|>
|> Mike
|
|Here's the SPICE files:
|
| http://www3.sympatico.ca/add.automation/misc/searle.htm
|
|Please be gentle:)
|
|Mike

Pre-Searle: MC1552/53 Video Amplifier (I devised the biasing scheme,
basic feedback-triple design by Solomon; I also was the math grunt,
computing gain, feedback stability and noise, circa 1964... when I was
24 years old, 39 years ago :-)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

464. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 19:27:43 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0eu7f0iha@drn.newsguy.com>
Source record: 38467
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote...
>
> Pre-Searle: MC1552/53 Video Amplifier (I devised the biasing scheme,
> basic feedback-triple design by Solomon; I also was the math grunt,
> computing gain, feedback stability and noise, circa 1964... when I
> was 24 years old, 39 years ago :-)

That was a nice design, Jim, something to be proud of. I remember using it way back when. But it has four transistors in the active signal path, rather than three, and goes to 40 or 50MHz with a gain of 34dB into a 1k load, rather than 100MHz into ? 50 ohms. Hmm, it appears Prof Searle's design was no slouch. :>)

Thanks,
- Win

465. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 20:10:06 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0f0mu0sg2@drn.newsguy.com>
Source record: 38470
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
>Here's the SPICE files:
>
> http://www3.sympatico.ca/add.automation/misc/searle.htm

OK, that's a shunt-series pair, as I posted, but you call it "Prof Searle's 100MHz 30dB 1968-era amplifier." My question is, did you simply use my thread title, or do you remember, was Prof Searle's design a shunt-series pair, or possibly was it something else? For example, Jim Thompson's design isn't a shunt-series pair, yet sports a certain simplicity.

```
. Mike Monett's mods, V+ V+ = 15V
. shunt-series pair | | G = 30.5dB (no load)
. (Art of Electronics R4 | -3dB BW = 560MHz
. page 872) V+ | C Q3
. | +----B all MMBR941
. R2 Q2 | E
. | C | 8.9V
. +------- B +---------- out
. | E |
. | | 5V | R1 = 50 (or ext source)
. ,--- | --- R6 --+--, | R2 = 750
. | | | | | R3 = 100
. | C R5 === | R4 = 470
. -||-- R1 -+- B Q1 | | | R5 = 470
. | E ground | R6 = 10k
. R9 | | R7 = 3.9k
. | +---||--- R7 -----+ R8 = 470
. gnd | | R9 = 15k
. R3 R8 bypass R5
. | |
. gnd gnd
```

WRT your version, I see you've added R9 to bias Q2's emitter up at 5V. Is there a reason for that (e.g., higher Q1 Vce), or was it to reduce R2, thereby extending the R2-Cob Miller integrator bandwidth of the 2nd stage, etc.?

Another comment, with R1 = 50 ohms (i.e. the RF generator's impedance) and R6 = 10k, the first R6/R1 feedback loop of a usual shunt-series pair is basically wide open, increasing the open-loop gain available for the second R7/R3 feedback

loop. Hmm, I wonder, is this a good idea, or a bad idea?

BTW, in a real design I'd scale back R6 and R9, to reduce the uncertain effect of Q1's beta. Usually high-bandwidth transistors have very poor DC gain. In this case, 1.7V of Q2's 5V emitter voltage is from Q1's uncertain base current dropping across the 10k resistor. :>)

Thanks,
- Win

466. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 20:10:18 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0f0na0shq@drn.newsguy.com>
Source record: 38469
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote...
>
> Pre-Searle: MC1552/53 Video Amplifier (I devised the biasing scheme,
> basic feedback-triple design by Solomon; I also was the math grunt,
> computing gain, feedback stability and noise, circa 1964... when I
> was 24 years old, 39 years ago :-)

That was a nice design, Jim, something to be proud of. I remember using it way back when. But it has four transistors in the active signal path, rather than three, and goes to 40 or 50MHz with a gain of 34dB into a 1k load, rather than 100MHz into ? 50 ohms. Hmm, it appears Prof Searle's design was no slouch. :>)

Thanks,
- Win

467. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 20:23:35 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <f31m2v4mh1ugqoh342873ul8b75jdr74dh@4ax.com>
Source record: 38468
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 19 Jan 2003 11:27:43 -0800,
Winfield Hill <whill@picovolt.com>,
In Newsgroup: sci.electronics.design,
Article: <b0eu7f0iha@drn.newsguy.com>,
Entitled: "Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie
amplifier",
Wrote the following:

|Jim Thompson wrote...
|>
|> Pre-Searle: MC1552/53 Video Amplifier (I devised the biasing scheme,
|> basic feedback-triple design by Solomon; I also was the math grunt,
|> computing gain, feedback stability and noise, circa 1964... when I
|> was 24 years old, 39 years ago :-)
|
| That was a nice design, Jim, something to be proud of. I remember
| using it way back when. But it has four transistors in the active
| signal path, rather than three, and goes to 40 or 50MHz with a gain
| of 34dB into a 1k load, rather than 100MHz into ? 50 ohms. Hmm, it
| appears Prof Searle's design was no slouch. :>)
|
| Thanks,
| - Win

The fourth transistor is a follower, and the feedback loop from that
emitter is a *DC* loop. The AC loop is the same as Searle's; Searle's
DC loop is different... mine sets Vo = Vcc/2.

Searle's design uses discrete transistors, one of the hottest devices
available, fT = 8GHz (were MMBRC941's available in Searle's day? ...I
think not... there were 914's, but I don't remember 941's), mine uses
a very early I/C process with 25.4um x 48.1um emitters, fT = 750MHz
:-)

Searle's circuit uses 42mA, mine 12.5mA.

I haven't followed this thread until Mike's post... how does Searle's
circuit drive 50 ohms?

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	

| Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
| http://www.analog-innovations.com | 1962 |

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

468. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 20:37:44 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2B0C98.179F@sneakemail.com>
Source record: 38471
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote:

[...]

> I haven't followed this thread until Mike's post... how does Searle's
> circuit drive 50 ohms?
>
> ...Jim Thompson

We don't know. It may have driven the 50 ohms of the network analyzer at low level, or he may have used a high-impedance probe. I don't remember for sure, but I think it went right into 50 ohms. I don't recall him wasting time with separate measurments of the probe bandwidth and having to calculate the overall gain. The demo went pretty fast, then it was time for the math.

Mike

469. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 20:41:41 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <iye9aIBF2wK+EwXy@jmwa.demon.co.uk>
Source record: 38473
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Winfield Hill <whill@picovolt.com>
wrote (in <b0cc6a0vpf@drn.newsguy.com>) about 'Prof Searle's 100MHz 30dB
1968-era 3-trannie amplifier', on Sat, 18 Jan 2003:
>OK, I'll start by posting a simple back-of-the-envelope design. The
> drawing below is taken from our book, figure 13.13, where we describe
> the operating principle of the amplifier. It has two local emitter-
> degeneration-feedback gain stages (R2/R3 and R4/R5), plus two more
> nested two-transistor feedback loops (R6/R1 and R7/R3). Clever, huh?
>
>. V+
>. shunt-series pair |
>. Art of Electronics R4
>. page 872 V+ |
>. | +----+---- out
>. R2 Q2 | |
>. | C |
>. +------- B |
>. | E |
>. | | |
>. ,--- | --- R6 --+ |
>. | | | |
>. | C R5 |
>. -||-- R1 -+- B Q1 | |
>. E gnd |
>. | |
>. +---||--- R7 ---'
>. |
>. R3
>. |
>. gnd
>
> I first learned of this configuration in the late 60s, it was popular
> in some circles. Mike, does this look familiar?

One of the circles was broadcast audio. A lot of these were used in BBC
audio equipment, AIUI, with variations around R5/R6, e.g. R5 decoupled
or not, R5 split in two with R6 going to the join, or a resistor in
series with the decoupling capacitor. IIRC, if the capacitor in series
with R7 is a big one (as it would often have to be), settling time on
switch-on can be long, so the capacitor is omitted. It then becomes an
interesting exercise to *calculate* appropriate resistor values, without
the aid of SPICE, of course; that didn't exist in the late 60s.

A little exercise was set in an examination for service techs in UK at
the time or a bit later: given the component values, determine the d.c.
voltages at all electrodes and the gain! I saw what was alleged to be a
'model answer', in which the collector current of the first transistor
was apparently deduced by divine inspiration. The circuit was alleged to
be the input stage of a household tape recorder recording amplifier,
which seemed a bit unlikely since R1 was 680 ohms! I wonder how many of
the poor B***s failed through that piece of incompetence.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

470. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 21:02:35 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2B126B.6453@sneakemail.com>
Source record: 38472
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote:

[...]

> The fourth transistor is a follower, and the feedback loop from that
> emitter is a *DC* loop. The AC loop is the same as Searle's; Searle's
> DC loop is different... mine sets Vo = Vcc/2.
>
> Searle's design uses discrete transistors, one of the hottest devices
> available, fT = 8GHz (were MMBRC941's available in Searle's day? ...I
> think not... there were 914's, but I don't remember 941's), mine uses
> a very early I/C process with 25.4um x 48.1um emitters, fT = 750MHz
> :-)
>
> Searle's circuit uses 42mA, mine 12.5mA.

[...]

> ...Jim Thompson

Win was concerned that I used Prof. Searle's name as a title for the html file, probably to avoid confusion like this. I used the title only to identify the thread, and we only suspect this configuration is the one he used. We don't know for sure.

The MMBR941's were not available in those days. They are in a SOT-23 package that didn't appear until later. I only used it since the 2N2222 didn't perform well, and I had the MMBR941 model already loaded so I didn't have to hunt for ones like the 2N2369 or 2N918.

Usually the MMBR series is a t0-18 or t0-92 converted to the SOT package, but the 2N941 appears to be a PNP according to an entry at

http://radvs.boom.ru/vtn2.html

If this entry is correct, the 2N941 was not the forerunner of the MMBR941 and could not have been used in this circuit.

The SPICE version shown on my web site is only an initial stab to get a feeling for the bias conditions. We have no idea of the actual supply voltage or current drain of Prof. Searle's circuit.

Mike

471. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 21:21:18 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <LDMn2YBObxK+Ewhv@jmwa.demon.co.uk>
Source record: 38474
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Jim Thompson <Jim-
T@analog_innovations.com> wrote (in <f31m2v4mh1ugqoh342873ul8b75jdr74dh@
4ax.com>) about 'Prof Searle's 100MHz 30dB 1968-era 3-trannie
amplifier', on Sun, 19 Jan 2003:
>were MMBRC941's available in Searle's day? ...I
>think not... there were 914's, but I don't remember 941's

Try swapping the base and collector connections.(;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

472. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 22:16:10 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2B23AA.726E@sneakemail.com>
Source record: 38475
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:

> Mike Monett wrote:
>>

>>Here's the SPICE files:
>>
>> http://www3.sympatico.ca/add.automation/misc/searle.htm

> OK, that's a shunt-series pair, as I posted, but you call it "Prof
> Searle's 100MHz 30dB 1968-era amplifier." My question is, did you
> simply use my thread title, or do you remember, was Prof Searle's
> design a shunt-series pair, or possibly was it something else? For
> example, Jim Thompson's design isn't a shunt-series pair, yet
> sports a certain simplicity.

You were right - sorry for the confusion. I just used the thread
title, and have changed the html file to show the relation to this
thread in case anyone else joins the thread in the middle.

I don't know for sure if this is the design he used, but I strongly
suspect it. There was an instant flash of recognition as soon as you
posted it, then my mind starts playing tricks, the same as changing
your answer on a multiple-choice quiz.

My gut instinct is this is the one he used. I have a strong
impression the feedback went to the emitter, which limits the number
of configurations in a two-transistor design. I believe the output
went straight into 50 ohms, which accounts for the emitter follower.

But this is just speculation. I don't have a copy of the original
schematic.

```
> . Mike Monett's mods, V+ V+ = 15V
> . shunt-series pair | | G = 30.5dB (no load)
> . (Art of Electronics R4 | -3dB BW = 560MHz
> . page 872) V+ | C Q3
> . | +----B all MMBR941
> . R2 Q2 | E
> . | C | 8.9V
> . +------- B +---------- out
> . | E |
> . | | 5V | R1 = 50 (or ext source)
> . ,--- | --- R6 --+--, | R2 = 750
> . | | | | | R3 = 100
> . | C R5 === | R4 = 470
```

> . -||-- R1 -+- B Q1 | | | R5 = 470
> . | E ground | R6 = 10k
> . R9 | | R7 = 3.9k
> . | +---||--- R7 -----+ R8 = 470
> . gnd | | R9 = 15k
> . R3 R8 bypass R5
> . | |
> . gnd gnd

> WRT your version, I see you've added R9 to bias Q2's emitter up at
> 5V. Is there a reason for that (e.g., higher Q1 Vce), or was it to
> reduce R2, thereby extending the R2-Cob Miller integrator
> bandwidth of the 2nd stage, etc.?

I used the time-honored "tune for maximum smoke" to get a feeling for the voltage stackup. Maximum smoke means max output swing with both hands firmly planted on your seat.

I set the collector resistances low to drive the stray capacity (not shown) and Miller effect. The bias drove me crazy. I recalled that R1 just pointed left in your original diagram, and it was not connected to anything, so I added R9 to make a voltage divider. The values for R6/R9 are way too high, but it was getting late and I was running out of time to make the simple change and have to redo all the plots.

The problem with my procedure is R5 got quite large. This means a bypass cap is needed across R5. Your circuit didn't need one, so I really would like to see the more organized approach that you would use.

> Another comment, with R1 = 50 ohms (i.e. the RF generator's
> impedance) and R6 = 10k, the first R6/R1 feedback loop of a usual
> shunt-series pair is basically wide open, increasing the open-loop
> gain available for the second R7/R3 feedback loop. Hmm, I wonder,
> is this a good idea, or a bad idea?

It's definitely not a good idea to have such high resistance values for R6/R9. Lowering them would tend to fix Vb1 which stabilizes the voltage across R3.

I like to have a resistance in series with the source just to get an idea of the input impedance. I raise it during the analysis to see how much effect it has on the results. In this case, the feedback to the emitter boostraps the input impedance, so it is quite good.

> BTW, in a real design I'd scale back R6 and R9, to reduce the
> uncertain effect of Q1's beta. Usually high-bandwidth transistors
> have very poor DC gain. In this case, 1.7V of Q2's 5V emitter
> voltage is from Q1's uncertain base current dropping across the
> 10k resistor. :>)

Yes, you are absolutely correct. It was just getting late.

> Thanks,
> - Win

Win, I'm sure there must be an optimum supply voltage where anything less would simply not give enough to bias the trannies on, and more would simply waste power as my approach did.

Can you show us your approach? I would like to sit back and be enlightened as always when you talk about how to design.

Mike

473. Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 22:46:08 UTC
From: Ben Sheehan <bigddybn@adelphia.net>
Message-ID: <QUFW9.9260$Fj2.5461057@news2.news.adelphia.net>
Source record: 38476

We live in a condo which pretty eliminates any possible outside antenna ideas. I'm looking for some type of antenna that can be used indoors. I do have a window right next to my chosen area for a "station" that could be utilized in some fashion. I realize that the gain on an indoor setup isn't going to be the greatest but is there something I can buy/build that would work at 144/440?

I know these noob questions get old, but thanks in advance for any advice you can offer.

474. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 22:54:13 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0faal020qg@drn.newsguy.com>
Source record: 38478
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Thompson wrote...
>
> Winfield Hill wrote
>
>|Jim Thompson wrote...
>|>
>|> Pre-Searle: MC1552/53 Video Amplifier (I devised the biasing scheme,
>|> basic feedback-triple design by Solomon; I also was the math grunt,
>|> computing gain, feedback stability and noise, circa 1964... when I
>|> was 24 years old, 39 years ago :-)
>|
>| That was a nice design, Jim, something to be proud of. I remember
>| using it way back when. But it has four transistors in the active
>| signal path, rather than three, and goes to 40 or 50MHz with a gain
>| of 34dB into a 1k load, rather than 100MHz into ? 50 ohms. Hmm, it
>| appears Prof Searle's design was no slouch. :>)
>
> The fourth transistor is a follower, and the feedback loop from that
> emitter is a *DC* loop. The AC loop is the same as Searle's;
> Searle's DC loop is different... mine sets Vo = Vcc/2.

Then you remember his specific circuit configuration? I take
it that it was different from the shunt-series pair I posted?

> Searle's design uses discrete transistors, one of the hottest devices
> available, fT = 8GHz (were MMBRC941's available in Searle's day? ...I
> think not... there were 914's, but I don't remember 941's), mine uses
> a very early I/C process with 25.4um x 48.1um emitters, fT = 750MHz
> :-)

Whoa, 8GHz transistors in 1968, that's pretty impressive. My 1983
Motorola databook lists up to 1.6 and 2.0GHz SOT-23 types under VHF
amplifiers, plus 4.0 and 5.5GHz types (MMBR930 at 30mA, 5V) under
RF SOT-23 Transistors, and that's the highest available for 1983.

> Searle's circuit uses 42mA, mine 12.5mA.

That's pretty detailed memory, do you know his circuit?
I'm simply speculating, not having ever seen it.

Thanks,
- Win

475. Re: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-19 22:57:43 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b0faeu$ofecj$1@ID-150848.news.dfncis.de>
Source record: 38477
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:...
> Seeking these shortform component data pocketbooks from Philips. Wanting the
1960's
> ones mostly.
>
> Please contact me direct if you have one to sell. Ta.
>
> My email: usual_REMOVEemail@ntlworld.com
>
> Please remove: "REMOVE".
>
> I'm in UK.
>
> Rich.
>
> Please note I have crossposted pretty extensively. But just wanting direct email
> responses not newsgroup responses.

I'm away from Monday to Wednesday this week. So I will not respond till Wednesday.
Look in your junkboxes, whatever. :c)

476. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 00:14:01 UTC
From: DeLuser <nospam@spammertt.eu>
Message-ID: <#Jw8jjBwCHA.2068@cpimsnntpa03>
Source record: 38479

"Ben Sheehan" <bigddybn@adelphia.net> wrote in message
news:QUFW9.9260$Fj2.5461057@news2.news.adelphia.net...
> We live in a condo which pretty eliminates any possible outside antenna
> ideas. I'm looking for some type of antenna that can be used indoors. I do
> have a window right next to my chosen area for a "station" that could be
> utilized in some fashion. I realize that the gain on an indoor setup isn't
> going to be the greatest but is there something I can buy/build that would
> work at 144/440?
>
> I know these noob questions get old, but thanks in advance for any advice
> you can offer.
>
>

You should look into building a J-Pole. You can build one with 300 OHM
TV twinlead and hang it outside or inside a window.

477. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 00:15:55 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <chfm2v0600mc4a761kqvh2u5bo85s6a193@4ax.com>
Source record: 38480
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 19 Jan 2003 14:54:13 -0800,
Winfield Hill <whill@picovolt.com>,
In Newsgroup: sci.electronics.design,
Article: <b0faal020qg@drn.newsguy.com>,
Entitled: "Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie
amplifier",
Wrote the following:

|Jim Thompson wrote...
|>

[snip]

|> Searle's circuit uses 42mA, mine 12.5mA.
|
| That's pretty detailed memory, do you know his circuit?
| I'm simply speculating, not having ever seen it.
|
| Thanks,
| - Win

What I call "Searle's circuit" is what Mike posted. The values are
from "Mike's" circuit. Looking through SEEC v5 (Thornton, Searle,
Pederson, Adler, & Angelo; 1965), I don't find that feedback-triple
configuration at all. (Thornton and Adler were my instructors at MIT;
Solomon did his thesis under Pederson at Berkeley, which is where I
think the configuration originated.)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

478. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 01:19:03 UTC
From: john graesser <graesser@tca.net>
Message-ID: <v2mk3gkdmg905a@corp.supernews.com>
Source record: 38481

"Ben Sheehan" <bigddybn@adelphia.net> wrote in message
news:QUFW9.9260$Fj2.5461057@news2.news.adelphia.net...
> We live in a condo which pretty eliminates any possible outside antenna
> ideas. I'm looking for some type of antenna that can be used indoors. I do
> have a window right next to my chosen area for a "station" that could be
> utilized in some fashion. I realize that the gain on an indoor setup isn't
> going to be the greatest but is there something I can buy/build that would
> work at 144/440?
>
> I know these noob questions get old, but thanks in advance for any advice
> you can offer.

About 4 feet behind me right now, sitting next to the window is a discone on a pvc stand, it hits the local repeaters just fine. Just be aware that you better work out how you are going to keep rf out of your power supply, mic cord, and radio with almost no seperation between antenna and rig. I only operate low power from this setup, since my apt complex manager has been very definite about no external antennas and I can't have anything showing to the outside. I do all my hf operating from the station in my car, since my complex has no rules about what I do with my car. At my previous apt where I could keep the discone on the porch outside, I was able to use it with an Icom 706mkII g and work 6m during field day.

Other experiments I have tried include a 9 element yagi for 440 hung from the ceiling with string, fixed in one direction, it did allow my handheld to hit a repeater that it couldn't hit with a duck. If you want both 2m and 70cm from the same antenna working omnidirectional, your choices a pretty well limited to a 2m 1/4 wave vertical, a dual band jpole like a copper cactus or a discone.
thanks, John.
KC5DWD

>
>

479. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 01:56:15 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <3HIW9.3488$zF6.299703@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38482
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

How much AC are you getting after the bridge? You shouldn't be getting much
at that point...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Woods Wannamaker" <e_2the_x@yahoo.com> wrote in message
news:88981065.0301190920.1ccdeb9@posting.google.com...
> The fuse conducts when checked with the ohmmeter. Voltage going into
> the transformer is ~120V AC. Voltage across the two wires coming from
> the secondary (blue and yellow) into the bridge rectifier (BR) is ~38V
> AC. Voltage across the other side of the BR (yellow and red wires) is
> ~18V AC. Voltage feeding onto the cirucit board from the BR is 18V. I
> actually get a reading both AC and DC there. The 16000 and 1000 mfd
> filter caps have 25 and 32 V DC, respectively. Voltage on the
> transistors is ~14V DC.
>
> D1 and D2 conduct in one direction but show reflectance in the other.
> D3 and D4 conduct in both directions (hmmm). Voltage across the D1 and
> D2 is 32V DC. Voltage across D3 and D4 is nil (even on the most
> sensitive scale). Does this identify the diodes D3 and D4 as
> defective? I suppose the LM723 chip could also be defective. How do I
> determine the correct replacements for D3 and D4, should these be the
> problem- from the schematic?
>
> Thanks for all the helpful posts and email responses.
>
> Woods

480. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 01:57:26 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <aIIW9.3489$zF6.299799@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38483

True, but most likely the electrolytics he's replacing are too large a value
to be replaced with mylars...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:kvAW9.6612$8N.829731@news1.east.cox.net...
> Yes. Especially if you are using mylars. They will outlive
> any electrolytic capacitor!
>
>
> "Edward Lewis" <kq6dx@pacbell.net> wrote in message
> news:j6ui2v0tgue6fviqqo73stpb8odnrn8qlg@4ax.com...
> > I am Replacing the Capacitors in a old tube tester that I bought at a
> > swap meet. I was wondering if it is ok to replace polarized capacitors
> > with un polarized, if the values are the same
> > Edward Lewis KQ6DX
> > kq6dx@pacbell.net
>
>

481. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 01:58:46 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <qJIW9.3492$zF6.299691@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38484
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

You got that right... lol

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

> Thermal compound was difficult to apply for 2N918 since it is a TO18
> device

482. Re: Powering HT from Cigarette Lighter Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 02:06:35 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <LQIW9.3506$zF6.300947@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38485

A filter is always nice in that circumstance to remove alternator whine, if
any. I've found that the Radio Shack #270-051 works like a million bucks...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Kent Haase" <ijeh99@mb.sympatico.ca> wrote in message
news:67IN9.6599$7_.27697@news1.mts.net...
> I've got a Kenwood 2m & 70cm HT that I wish to power from the cigarette
> lighter socket in a vehicle. Kenwood makes a "filtered" plug and cord
> assembly (probably $$), but I've got several unneeded assemblies for
> charging a cellphone, and I'd like to adapt one of them by replacing the
> charger circuitry with a filter.
>
> What approach should I use to construct such a filter? Lowpass PI filter?
> What -3dB frequency? Should I filter both sides of the 12V? Do I even
> really need one?
>
> Any comments appreciated.
> Kent VE4KEH
>
>

483. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 05:46:08 UTC
From: john graesser <graesser@tca.net>
Message-ID: <v2n3vg2cqn3j07@corp.supernews.com>
Source record: 38486
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

"Brian Griffey" <briangriffey@worldnet.att.net> wrote in message
news:3HIW9.3488$zF6.299703@bgtnsc04-news.ops.worldnet.att.net...
> How much AC are you getting after the bridge? You shouldn't be getting
much
> at that point...

Since the output of the bridge is pulsed DC it will have both DC and AC
components.

If the capacitors are bad they will never charge up and even out the voltage
swings from the bridge.

It will appear to be AC at roughly half the input voltage on a cheap meter.

Is there an Oscope available to help check out the equipment? Or is the
repair being done with just a vom?
thanks, John.
KC5DWD

484. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 06:56:36 UTC
From: Tony Williams <tonyw@ledelec.demon.co.uk>
Message-ID: <4bb7a2fd0ftonyw@ledelec.demon.co.uk>
Source record: 38487
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <chfm2v0600mc4a761kqvh2u5bo85s6a193@4ax.com>,
Jim Thompson <Jim-T@analog_innovations.com> wrote:

> What I call "Searle's circuit" is what Mike posted. The values are
> from "Mike's" circuit. Looking through SEEC v5 (Thornton, Searle,
> Pederson, Adler, & Angelo; 1965), I don't find that feedback-triple
> configuration at all. (Thornton and Adler were my instructors at MIT;
> Solomon did his thesis under Pederson at Berkeley, which is where I
> think the configuration originated.)

Page 99, Fig 3.16 and P103, Fig 3.23, are series-shunt
pair circuits, similar to those being discussed.

--
Tony Williams.

485. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 07:49:33 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <s48e4IANo6K+Ew3V@jmwa.demon.co.uk>
Source record: 38488
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that J M Noeding <la8ak.xnd@online.no>
wrote (in <3e2aad9b.316609136@news.online.no>) about 'Limitations of the
BC337', on Sun, 19 Jan 2003:

>Thermal compound was difficult to apply for 2N918 since it is a TO18
>device

I just tried it on a BC107; it's extremely easy. I don't suppose it has
much effect, even though the collector is connected to the case. (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

486. Re: Astron RS-12A Repair Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 11:44:15 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <jiRW9.120456$hK4.9759360@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38489
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

Half the DC voltage with no load????
I hope not...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"john graesser" <graesser@tca.net> wrote in message
news:v2n3vg2cqn3j07@corp.supernews.com...
>
> "Brian Griffey" <briangriffey@worldnet.att.net> wrote in message
> news:3HIW9.3488$zF6.299703@bgtnsc04-news.ops.worldnet.att.net...
> > How much AC are you getting after the bridge? You shouldn't be getting
> much
> > at that point...
>
> Since the output of the bridge is pulsed DC it will have both DC and AC
> components.
>
> If the capacitors are bad they will never charge up and even out the
voltage
> swings from the bridge.
>
> It will appear to be AC at roughly half the input voltage on a cheap
meter.
>
> Is there an Oscope available to help check out the equipment? Or is the
> repair being done with just a vom?
> thanks, John.
> KC5DWD
>
>
>
>
>
>
>

487. Re: WTB: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 12:29:36 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <gEM7UwAwu+K+Ew06@g3msw.demon.co.uk>
Source record: 38490
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

I have the odd Mullard data book. Is that what you meant.
In article <b0ee84$oj4ff$1@ID-150848.news.dfncis.de>, Richard
<nearlynews_email@ntlworld.com> writes
>Seeking these shortform component data pocketbooks from Philips.
>Wanting the 1960's
>ones mostly.
>
>Please contact me direct if you have one to sell. Ta.
>
>My email: usual_REMOVEemail@ntlworld.com
>
>Please remove: "REMOVE".
>
>I'm in UK.
>
>Rich.
>
>Please note I have crossposted pretty extensively. But just wanting
>direct email
>responses not newsgroup responses.

--
Ken Ashcroft

488. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 14:00:09 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0gvd902aej@drn.newsguy.com>
Source record: 38491
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike wrote...
>
> The MMBR941's were not available in those days. They are in a
> SOT-23 package that didn't appear until later. I only used it
> since the 2N2222 didn't perform well, and I had the MMBR941 model
> already loaded so I didn't have to hunt for ones like the 2N2369
> or 2N918.

It's a much better part than either of those transistors, and
possibly better than anything else available in 1968. BTW, do
you have any of them?

> ... If this entry is correct, the 2N941 was not the forerunner of
> the MMBR941 and could not have been used in this circuit.

That's correct, the 2n941 is a early transistor, no relation.

Thanks,
- Win

489. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 16:07:49 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ygVW9.758$Ow1.140823@newsfep1-win.server.ntli.net>
Source record: 38492

> You should look into building a J-Pole. You can build one with 300 OHM
> TV twinlead and hang it outside or inside a window.
==========
Yes ,indeed . Perhaps a coincedence ,but in QST -Feb2003 , pages 38-39 there
is an article by WB6INQ on this very topic.
The 300 Ohm tv ribbon dual band J-Pole has been fitted inside a piece of
plastic pipe. Also is needed approx 25 inches of RG-174 coax cable and
obviously a SO-239 or even better ,female N-connector .

Frank gm0csz.kn6wh@ntlworld.com

490. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 16:16:36 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <p78o2vkgi2vrm4gkb2usmfcoa2iin1e941@4ax.com>
Source record: 38494
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 20 Jan 2003 06:56:36 +0000 (GMT),
Tony Williams <tonyw@ledelec.demon.co.uk>,
In Newsgroup: sci.electronics.design,
Article: <4bb7a2fd0ftonyw@ledelec.demon.co.uk>,
Entitled: "Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie
amplifier",
Wrote the following:

|In article <chfm2v0600mc4a761kqvh2u5bo85s6a193@4ax.com>,
| Jim Thompson <Jim-T@analog_innovations.com> wrote:
|
|> What I call "Searle's circuit" is what Mike posted. The values are
|> from "Mike's" circuit. Looking through SEEC v5 (Thornton, Searle,
|> Pederson, Adler, & Angelo; 1965), I don't find that feedback-triple
|> configuration at all. (Thornton and Adler were my instructors at MIT;
|> Solomon did his thesis under Pederson at Berkeley, which is where I
|> think the configuration originated.)
|
| Page 99, Fig 3.16 and P103, Fig 3.23, are series-shunt
| pair circuits, similar to those being discussed.

Not quite, in "Searle's" circuit and the 1552/53 the AC feedback is
emitter-to-emitter.

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

491. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier..Wow

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 16:17:25 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <piVW9.120739$hK4.9778814@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38493
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

snip
http://www3.sympatico.ca/add.automation/misc/searle.htm
>

Great link to a web page that has ledgible schematics!

Bravo! And, thanks for posting such fine work!

Marc

492. re: Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 23:24:48 UTC
From: Fred <peerenbf@dma.org>
Message-ID: <Pine.LNX.4.44.0301201823001.2059-100000@dmapub.dma.org>
Source record: 38495

I am comming into this thread late, but the main problem that I have had with the Astron supply is the LM723 over 90% of the time. I have found it to be so in 7 out of the last 8 supplies that I fixed.
FWIW
Fred

--

493. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-20 23:59:17 UTC
From: averyfineman@aol.com
Message-ID: <20030120185917.17197.00000271@mb-bd.aol.com>
Source record: 38496

>"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
>news:f7d9a152.0301120757.33d3f4bc@posting.google.com...
>> What do you use to amplify small DC voltages?
>>
>> The trouble with amplifying DC voltage is the interference from DC
>> offsets in the amplifier. While you can use a high-pass filter to
>> remove the DC offset for an amplifier in the audio or higher
>> frequencies, this is not an option for DC, as this would attenuate the
>> DC signal as much as the DC offset.
>>
>> Jason Hsu, AG4DG
>> usenet@@@@@@@@@@@@jasonhsu.com

Go to www.elecdesign.com and check "Pease Porridge" for
6 January 2003. Therein Bob Pease (of National Semiconductor)
describes the George A. Philbrick K2-W general-purpose
operational amplifier. Just two 12AX7 dual triodes and two
neon bulbs acting as a "voltage-dropping zener." The K2-W was
made during 1951-1971 (20 years!) and cost $22. The first
"709" op-amp cost about $25 (general purpose specs). It was
in a neat little plug-in plastic "chassis" with an octal tube base,
the "top" flaring slightly to hold the two 12AX7s side-by-side.

Following the Electronic Design magazine schematic will let
you understand the quiescent DC voltage shifts that enable
DC level amplification. Problem is, you have to STUDY it
since it isn't intuitive.

For a more all-around example of DC-coupled amplifiers, look
at any old Tektronix 535 or 545 oscilloscope manual and one
of the plug-ins for either (both take the same kinds). Those
manuals have the full schematics with quiescent DC levels
and example AC waveforms given in each diagram fold-out.

For a much greater variety of examples, look at National
Semi, Fairchild, or Motorola databooks and observe that many
op-amps are given in representative schematic form on their
datasheets. Again, with some STUDY you can sit down and
check out quiescent DC current flow and voltage levels (easier
with bipolars due to reasonably-constant Vbe in base-emitter
forward conduction) versus the built-in resistances.

Jason, please phrase your questions as questions you've
already thought about instead of bringing up some "challenge"
condition such as the "high-pass filter" thing (not really
applicable to DC coupling in DC-AC amplifiers although it

does cause a high-frequency rolloff). DC amplification has been going on in electronics since before WW2, in tube and then in semiconductor circuitry.

Len Anderson
retired (from regular hours) electronic engineer person

494. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 02:34:37 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2CB1BD.7DA6@sneakemail.com>
Source record: 38397
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:

[...]

> It's a much better part than either of those transistors, and
> possibly better than anything else available in 1968. BTW, do
> you have any of them?

Yes, the MMBR941 is my favorite part, although my stock is being depleted
and I will have to hunt for the Philips or MaCom versions soon.

> > ... If this entry is correct, the 2N941 was not the forerunner of
> > the MMBR941 and could not have been used in this circuit.
>
> That's correct, the 2n941 is a early transistor, no relation.
>
> Thanks,
> - Win

Mike

495. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 02:56:16 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b0icsg02mko@drn.newsguy.com>
Source record: 38398
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote...
>
> Yes, the MMBR941 is my favorite part...

I was able to get a Motorola datasheet from freetradezone, but
none of the five different Motorola databooks I looked in had it.
(Perhaps I'd better look again.) In what year's databook did you
find the datasheet, and when did you first buy your parts?

> ... although my stock is being depleted and I will have to hunt
> for the Philips or MaCom versions soon.

It seems there are better parts these days.

Thanks,
- Win

496. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 03:42:28 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2CC1A4.74EA@sneakemail.com>
Source record: 38399
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
>
> Mike Monett wrote...
> >
> > Yes, the MMBR941 is my favorite part...
>
> I was able to get a Motorola datasheet from freetradezone, but
> none of the five different Motorola databooks I looked in had it.
> (Perhaps I'd better look again.) In what year's databook did you
> find the datasheet, and when did you first buy your parts?

The earliest file date I have on a cad file for a system that used
them is Oct 31, 1990. The datasheet was in a series of Motorola
databooks that were probably distributed one or two years earlier.

> > ... although my stock is being depleted and I will have to hunt
> > for the Philips or MaCom versions soon.
>
> It seems there are better parts these days.
>
> Thanks,
> - Win

Sure, there are many to choose from now. I like the MMBR941 for
general-purpose use up to about 1GHz. They are a 2N2222 with wings:)

Mike

497. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 12:47:55 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2D417B.1456@sneakemail.com>
Source record: 38400
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill wrote:
>
> Mike Monett wrote...

[...]

> > Now I'd like to see how it really should be done!
> Nah, your circuit the looks like the winner. But I'll show you my
> 2n918 circuit if you show me yours. :>)
>
> Thanks,
> - Win

OK, I put mine up. Can we take a peek at yours? I'd like to see what supply voltage you used, and how you got rid of the bypass.

This circuit is deceptively simple. But due to the voltage stackup, you gotta have a plan, or you end up with problems like mine has. What's your plan, and how did you distribute the voltage between the two gain stages?

The other gotcha is you are restricted to a fairly narrow range of collector resistance to maintain bandwidth. But this leads to dissipation problems in the transistors.

Another problem is to meet design goals with 1960's era transistors. The 30dB gain figure was only a recollection. The statement "flat to 100MHz" dos not tell us where the -3dB point was. Perhaps with modern tools, we can get a fairly good idea of what it might be.

So the circuit is not as simple as it looks. I showed the wrong way to do it. What's the right way?

Mike

498. Re: Prof Searle's 100MHz 30dB 1968-era 3-trannie amplifier..Wow

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 13:05:46 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2D45AA.6514@sneakemail.com>
Source record: 38401
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Marc H.Popek wrote:
>
> snip
> http://www3.sympatico.ca/add.automation/misc/searle.htm
> >
>
> Great link to a web page that has ledgible schematics!
>
> Bravo! And, thanks for posting such fine work!
>
> Marc

Thanks!

Mike

499. Re: How do you amplify DC voltage?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 15:29:19 UTC
From: aeonsciltd@ineedhits-mail.com
Message-ID: <36173532.0301210729.3ddfef0c@posting.google.com>
Source record: 38402

Amplifacation is a process where frequencies modulate or combine to produce a new charictoristic frequency at a higher or lower output, much like Plank's wave guide inwhich waves cancel or magnify when passing through a grid... The formulas canbe found in almost any tech manuscript, but the results are more often not "not quite what you expect". Check out my homepage at "http://www.aeons2c.com" for some exciting new news!

aeonsciltd@ineedhits-mail.com.com

500. Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 23:25:34 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E2DD6EE.7988C43A@osite.com.br>
Source record: 38403

Does anyone have hands-on experience with this kind of
connector?
Iï¿½ve just found their representative in PY-land.

Since what Iï¿½ve seen on the 'net is mainly good sayings, I
wish to give them a try...

73 de PU2PIX
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

501. Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-21 23:48:12 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>
Source record: 38404
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having purchased crystals in many years where is the best place to buy them ?? We will be using the repeater on 146.01/61.Also is there a site with the specs for the channel elements ?
Rcvr Channel Element : KXN 1086A
Xmtr Channel Element : KXN 1088A
THANKS.

502. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 00:07:48 UTC
From: Ken Wolfe <ken@iwolfe.net>
Message-ID: <v2ro6n9q05od35@corp.supernews.com>
Source record: 38405

This is the connector of choice at Westmountainradio.com for their Rigrunner power distribution panels.
And the official connector of APRS.

I have used them for many years without any failures.

Ken
K3QV

"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E2DD6EE.7988C43A@osite.com.br...
> Does anyone have hands-on experience with this kind of
> connector?
> I�ve just found their representative in PY-land.
>
> Since what I�ve seen on the 'net is mainly good sayings, I
> wish to give them a try...
>
> 73 de PU2PIX
> --
> Paulo E.P. Marcondes
> Ge�logo - Mestrando USP
> pepm@osite.com.br

503. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 00:40:10 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <KLIX9.20143$8N.2002213@news1.east.cox.net>
Source record: 38406

We do a lot of vintage receivers with 10 uf / 450 volt electrolytics
that we replace with 10 mfd mylars from Hosfelt Electronics.

Pete

"Brian Griffey" <briangriffey@worldnet.att.net> wrote in message
news:aIIW9.3489$zF6.299799@bgtnsc04-news.ops.worldnet.att.net...
> True, but most likely the electrolytics he's replacing are too large a
value
> to be replaced with mylars...
>
> --
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
> Brian Griffey
> See the SkyWave Linear Amplifier at
> http://home.att.net/~briangriffey/Index.html
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>
>
> " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> news:kvAW9.6612$8N.829731@news1.east.cox.net...
> > Yes. Especially if you are using mylars. They will outlive
> > any electrolytic capacitor!
> >
> >
> > "Edward Lewis" <kq6dx@pacbell.net> wrote in message
> > news:j6ui2v0tgue6fviqqo73stpb8odnrn8qlg@4ax.com...
> > > I am Replacing the Capacitors in a old tube tester that I bought at a
> > > swap meet. I was wondering if it is ok to replace polarized capacitors
> > > with un polarized, if the values are the same
> > > Edward Lewis KQ6DX
> > > kq6dx@pacbell.net
> >
> >
>
>

504. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 00:41:32 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0NIX9.20148$8N.2003188@news1.east.cox.net>
Source record: 38407
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

International Crystal in Oklahoma City, OK. Don't screw around, send
them the channel elements for recrystaling, calibration, and aging.
You get exactly what you pay for, and ICM is first rate.

Pete

"FM" <radiovintage@hotmail.com> wrote in message
news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the
specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.
>
>

505. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 01:00:15 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18978cf5de5bd9969896f5@192.168.42.131>
Source record: 38408
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In article <0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>,
radiovintage@hotmail.com says...

> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A

Those are the same elements as used in Mitrek radios. You should
have little trouble finding them from ham swaps, or from International
Crystal.

If all else fails, contact me via E-mail. I may have some extras
that you could send to ICM for recrystaling.

FWIW: The MSR2000's a nice box. It should make you a fine repeater.

73 de KC7GR.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

506. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 01:05:48 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <0cSdnWAAw936c7CjXTWcqA@comcast.com>
Source record: 38409
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I agree that ICM is the place to send your elements to.

Check out www.batlabs.com however as they may have additional information.

Bob M.
======
"FM" <radiovintage@hotmail.com> wrote in message
news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the
specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.
>
>

507. Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 01:20:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3e2dee52.310299@news.online.no>
Source record: 38410

Hi

What I need is a local oscillator for a VLF receiver. The LO must cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO and divide the output down to 220-300kHz.

The problem is that the boatanchor is xtal controlled telex receiver, but I would like it to have continous tuning. IF = 169kHz

Have a vague thought about using digital mixer, and it is an advantage to divide by two in the end. So if possible I would use a JK or D-type IC, preferably CD4013 since it is simpler to connect than CD4027.

Would like to hear opinions about a possible solution

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

508. Tick keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 02:33:07 UTC
From: samuel_ramac@hotmail.com
Message-ID: <6ebdc475.0301211833.424c9d03@posting.google.com>
Source record: 38412

Does anyone know if Embedded Research is still in business? I have ordered a Tick keyer thru the mail and haven't received anything. I emailed them a few times without any response at all.

Thanks.

Samuel Ramac

509. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 02:34:29 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v2s0n0e9bcrmf8@corp.supernews.com>
Source record: 38413
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I too have used International Crystal for several decades. Whether it
is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
they do it right the first time. Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> International Crystal in Oklahoma City, OK. Don't screw around, send
> them the channel elements for recrystaling, calibration, and aging.
> You get exactly what you pay for, and ICM is first rate.
>
> Pete
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
having
> > purchased crystals in many years where is the best place to buy them
?? We
> > will be using the repeater on 146.01/61.Also is there a site with
the
> specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.

510. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 02:45:17 UTC
From: Idontwantspam@net
Message-ID: <3e2e0579.1988539@news.bellatlantic.net>
Source record: 38414

On Tue, 21 Jan 2003 20:44:51 -0800, "Douglas Snowden"
<snowden@peoplepc.com> wrote:

>I am looking for ways to slow down the speed of a 115vac squirrel cage
>motor.
>It has a starting capacitor. I have put 100 ohm resistors on muffin fans
>and that worked ok,
>but with a squirrel cage motor, it tends to prevent it from starting up.
>The reason I am
>doing it is because I have plenty of air available, and I want to lessen the
>amount of
>vibration from the fan. The fan is mounted on the same aluminum box as a
>Russian
>GS-35B tube. I am a bit worried that there might be too much vibration for
>the tube.
>There is not a lot, but any is too much to me. I guess I could remove the
>fan and hook a
>short hose to it, but that is not as clean as the way I am trying.
>
You could also use rubber mounts in between the fan and frame.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

511. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 02:47:32 UTC
From: aeonsciltd@ineedhits-mail.com
Message-ID: <36173532.0301211847.1b2e7e64@posting.google.com>
Source record: 38415
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hi:

I would not recomend this but a crystals persent value is
measured in parts per million, if you get the largest value and
muliply by 10: the percent is now measured in parts per 10,000! I
order from supliers who advertise in popular electronics magazines,
are there any supliers who custom fit to the needs of the consumer?

aeonsciltd@ineedhits-mail.com

512. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 03:43:44 UTC
From: microwavetechnology@yahoo.com
Message-ID: <9d3c8fdc.0301211943.5f8e2701@posting.google.com>
Source record: 38416
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

ICM

http://www.icmfg.com/

A little more, but worth it to save a trip to the hill to warp a CHEAP crystal.

513. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 04:08:52 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v2s6ca40h0a484@corp.supernews.com>
Source record: 38417

PowerPoles are very good connectors. I did not have much luck crimping them with the inexpensive tools offered by West Mountain Radio because it slightly deforms the contact and makes it difficult to insert properly. I now solder the wire into the contact and that seems to work quite well. I expect the Anderson tool (around $100 as I recall) would make a proper crimp.

514. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 04:23:14 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E2E1CB1.8BC26FAE@northwest.com>
Source record: 38418

i believe squirrel cage motors rotate at a rate based on the 60Hz line freq as well as the number of poles in the motor rotor. if this is so, then you'd have to vary the freq of the 115V supply.

you can also mislead yourself into thinking that slower RPM means less vibration. the amplitude might be as great but the freq of vibration would be lower.

==========

Douglas Snowden wrote:

> I am looking for ways to slow down the speed of a 115vac squirrel cage
> motor.
> It has a starting capacitor. I have put 100 ohm resistors on muffin fans
> and that worked ok,
> but with a squirrel cage motor, it tends to prevent it from starting up.
> The reason I am
> doing it is because I have plenty of air available, and I want to lessen the
> amount of
> vibration from the fan. The fan is mounted on the same aluminum box as a
> Russian
> GS-35B tube. I am a bit worried that there might be too much vibration for
> the tube.
> There is not a lot, but any is too much to me. I guess I could remove the
> fan and hook a
> short hose to it, but that is not as clean as the way I am trying.
>
> 73, Doug, N4IJ

515. Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 04:44:51 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v2rtlkeg25ca7@corp.supernews.com>
Source record: 38411

I am looking for ways to slow down the speed of a 115vac squirrel cage
motor.
It has a starting capacitor. I have put 100 ohm resistors on muffin fans
and that worked ok,
but with a squirrel cage motor, it tends to prevent it from starting up.
The reason I am
doing it is because I have plenty of air available, and I want to lessen the
amount of
vibration from the fan. The fan is mounted on the same aluminum box as a
Russian
GS-35B tube. I am a bit worried that there might be too much vibration for
the tube.
There is not a lot, but any is too much to me. I guess I could remove the
fan and hook a
short hose to it, but that is not as clean as the way I am trying.

73, Doug, N4IJ

516. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 05:28:44 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <b0m6au4184m@enews4.newsguy.com>
Source record: 38422

Try something along the lines of a "dimmer" switch, obviously designed for the power load you are going to be using it for. When first starting it up, keep the dimmer switch in full-open/unrestricted setting and then "dial down" to the rpm's that you desire. I am sure that there is some type of product at the electrical stores that would serve this need.

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"Symbolism is for the simple minded....."

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:v2rtlkeg25ca7@corp.supernews.com...
> I am looking for ways to slow down the speed of a 115vac squirrel cage
> motor.
> It has a starting capacitor. I have put 100 ohm resistors on muffin fans
> and that worked ok,
> but with a squirrel cage motor, it tends to prevent it from starting up.
> The reason I am
> doing it is because I have plenty of air available, and I want to lessen
the
> amount of
> vibration from the fan. The fan is mounted on the same aluminum box as a
> Russian
> GS-35B tube. I am a bit worried that there might be too much vibration
for
> the tube.
> There is not a lot, but any is too much to me. I guess I could remove the
> fan and hook a
> short hose to it, but that is not as clean as the way I am trying.
>
>
> 73, Doug, N4IJ
>
>
>
>

517. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 07:37:38 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <jVveccDCpkL+EAML@ifwtech.co.uk>
Source record: 38419

Bob Lewis (AA4PB) wrote:
>PowerPoles are very good connectors.

Yes, they are very good, and the 35A size is good for almost all applications. This is the size West Mountain Radio uses, because ARRL recommends it as a standard.

Through my magazine column I have been recommending the same as a UK standard - it's on the 'In Practice' web site. Everybody, everywhere follows the standard polarity diagram from PowerWerx.

>I did not have much luck crimping
>them with the inexpensive tools offered by West Mountain Radio because
>it slightly deforms the contact and makes it difficult to insert
>properly.

Agreed - simply squashing the sleeve down flat will make it too wide to fit easily.

Another point when making connections to heavy twin wire: make sure that the two connector blades are *exactly* level and parallel - if not, it becomes very difficult to force both blades into the housing.

>I now solder the wire into the contact and that seems to
>work quite well. I expect the Anderson tool (around $100 as I recall)
>would make a proper crimp.

Probably any tool that makes a proper hexagonal crimp will be OK. Being an amateur, I use the heavy wire cutter to crimp the sleeve only just enough to hold it in place, and then solder.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

518. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 07:50:01 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <i9fs2v8u38bfoc5d42auakc0mchmtnn8v8@4ax.com>
Source record: 38420

On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding) wrote:

>Hi
>
>What I need is a local oscillator for a VLF receiver. The LO must
>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
>and divide the output down to 220-300kHz.

Why don't you run the VFO directly at 220-300kHz, the required capacitance range is only 1.9:1, so this could be done without band switching. A 10 ppm frequency drift would alter the Rx frequency by less than 3 Hz.

The required inductances and capacitances would have to be quite large and hard to get, so indeed it would be nice to run the VFO at a higher frequency. Why not run the VFO at say, 16 times the desired LO frequency (3520 .. 4800kHz) and simply divide it by 16. The required capacitance range would be the same as in the previous case. A 10 ppm frequency drift would alter the VFO by less than 48 Hz, but the Rx frequency by less than 3 Hz.

The good thing with your original approach is that the required VFO capacitance range would be quite small, but the problem with your approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it directly down to 220 to 300 kHz, the Rx frequency drift would be 20 Hz and if a divide by two stage is used after the mixer, the Rx drift would be 10 Hz, still clearly much worse than running the VFO at the LO frequency or simply dividing it down to the LO frequency.

The down mixing approach is nice if you have to start the frequency range from (practically zero) as in audio generators with a linear frequency scale from below 20 Hz to 20 kHz in a single band (however with mediocre frequency stability).

The up mixing approach is nice for generating a narrow frequency band in the HF/VHF/UHF range with the good stability of a free running MF or low band HF oscillator.

However, neither of these cases match your requirement and in fact using it will just add to the drift without any benefits.

Paul OH3LWR

519. No Xmit - Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 11:49:26 UTC
From: John Sicotte <johndoh787@nospam.hotmail.com>
Message-ID: <azvX9.4138$hy.430@nwrddc04.gnilink.net>
Source record: 38421

OK, I know this isn't a homebrew radio so don't flame me. But I figure if anybody knows anything about radios, it's you guys in this newsgroup.

My Icom IC-229H suddenly stopped transmitting. It looks like it is still transmitting, it keys up and it is still pulling in 10 amps from the power supply so where is all that power going? RF output is nothing. Any ideas?

Thanks,
John N7MTB

520. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 13:58:25 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E2EA360.9A24987@shaw.ca>
Source record: 38423
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"J. McLaughlin" wrote:
>
> I too have used International Crystal for several decades. Whether it
> is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
> they do it right the first time. Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> > International Crystal in Oklahoma City, OK. Don't screw around, send
> > them the channel elements for recrystaling, calibration, and aging.
> > You get exactly what you pay for, and ICM is first rate.
> >
> > Pete
> >
> > "FM" <radiovintage@hotmail.com> wrote in message
> > news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
> having
> > > purchased crystals in many years where is the best place to buy them
> ?? We
> > > will be using the repeater on 146.01/61.Also is there a site with
> the
> > specs
> > > for the channel elements ?
> > > Rcvr Channel Element : KXN 1086A
> > > Xmtr Channel Element : KXN 1088A
> > > THANKS.

You can order them directly over the phone with International. Make
sure to have the Equipment model number and the channel frequencies
handy. I've used them for many years with great satisfaction!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

521. HP 5328B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 16:13:25 UTC
From: adibene@yahoo.com
Message-ID: <e9aa0d73.0301220813.64c85a9e@posting.google.com>
Source record: 38424

Hi all,
I am looking for words of wisdom about the HP 5328B counter.
I have just bought one on ebay, with options 010 and 050.
It works, but the digits (and the other small leds) on the display
have a faint brightness, which changes with the number of them being on.
The more are on, the lesser is the brightness.
I suspect thet some driver chips must be replaced, but I don't have
a service manual.

Does anybody who has an intimate knowledge of this counter have
suggestions about this ? Which are the ICs to be replaced ?
Which is the procedure to mechanically disassemble the front panel,
behind which those driver ICs seem to be ?

Thanks a lot for any hints, suggestions, advices, etc.

73 Alberto I2PHD

522. Re: No Xmit - Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 16:52:15 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18986c1c4c8c3bb19896fa@192.168.42.131>
Source record: 38425

In article <azvX9.4138$hy.430@nwrddc04.gnilink.net>,
johndoh787@nospam.hotmail.com says...

> My Icom IC-229H suddenly stopped transmitting. It looks like it is still
> transmitting, it keys up and it is still pulling in 10 amps from the power
> supply so where is all that power going? RF output is nothing. Any ideas?

I've seen Motorola radios do the same thing. The culprit has almost
always been the T/R relay at the antenna connector.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

523. Re: HP 5328B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 16:54:46 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18986cb1236f370a9896fb@192.168.42.131>
Source record: 38426

In article <e9aa0d73.0301220813.64c85a9e@posting.google.com>,
adibene@yahoo.com says...

> Hi all,
> I am looking for words of wisdom about the HP 5328B counter.
> I have just bought one on ebay, with options 010 and 050.
> It works, but the digits (and the other small leds) on the display
> have a faint brightness, which changes with the number of them being on.
> The more are on, the lesser is the brightness.
> I suspect thet some driver chips must be replaced, but I don't have
> a service manual.

http://www.manualsplus.com

According to their search engine, the currently have a reprint
manual for the 5328B in stock at $55.00. A worthy investment, not just to
fix the existing problem but to keep the resale value of that counter up.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

524. Re: No Xmit - Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 17:09:46 UTC
From: Idontwantspam@net
Message-ID: <3e2ece88.26640587@news.bellatlantic.net>
Source record: 38427

On Wed, 22 Jan 2003 08:52:15 -0800, Bruce Lane
<SpammersAreVermin@dev.nul> wrote:

>In article <azvX9.4138$hy.430@nwrddc04.gnilink.net>,
>johndoh787@nospam.hotmail.com says...
>
>> My Icom IC-229H suddenly stopped transmitting. It looks like it is still
>> transmitting, it keys up and it is still pulling in 10 amps from the power
>> supply so where is all that power going? RF output is nothing. Any ideas?
>
> I've seen Motorola radios do the same thing. The culprit has almost
>always been the T/R relay at the antenna connector.
>
The power is going into heating up components (sometimes
destructively). Don't try to transmit, except for brief testing, until
the problem is fixed.

Abrupt problems are generally easier to troubleshoot than gradual or
intermittent ones.

Quicky troubleshooting would involve:

Look for loose connections
Testing anything with moving parts (such as the relay above)
follow the circuit and look for toasted components or sections of the
board
testing or swapping out ICs
looking at caps and testing them

Usual precautions about working on live circuits
(i.e., don't get the nickname or the epitaph "Sparky")

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

525. for those few of us still able to do home repairs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 18:50:41 UTC
From: G4BXD@qsl.net
Message-ID: <3e2ecca6.631581@news.compuserve.com>
Source record: 38428

for those few of us still able to do home repairs...

A tip for parts, not for the vintage stuff but for the near vintage.

5/6 year old handie, ADI AT-600, blown vhf power slab. wanted a new one.

manufactuer has no spares, UK wanted £56, German radio shop.. £20 posted. 10 mins after arrival set back on the air.

Price was even better in Japan, only £15, with postage etc about the same as D

so, it used to be look west, now its look near east.

no wonder this country is what it is.

BN.

German firm:- Rainer Zimmer Communication
have no connection other than satisfied customer.

526. Re: HP 5328B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 20:03:43 UTC
From: Wim Ton <wimton@blueyonder.co.uk>
Message-ID: <rLCX9.40$oU2.34@news-binary.blueyonder.co.uk>
Source record: 38429

There are a lot of CDROMS with HP manals on Ebay as well, often about ?13

Wim

527. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 21:44:43 UTC
From: Ken Wolfe <ken@iwolfe.net>
Message-ID: <v2u46a6324dt2c@corp.supernews.com>
Source record: 38430

Go to westmountainradio.com, Look for the section regarding Powerpole crimping.
http://www.westmountainradio.com/supportrr.htm The proper crimp is NOT flat.
The crimper that they sell is Very good at making the proper crimps. It is a two step process that is recommended by Anderson.
I used to solder all my PP connections until I read this page. Now, if soldering is absolutely necessary, I'll use silver bearing solder instead of regular 60/40

Ken
K3QV

> >I did not have much luck crimping
> >them with the inexpensive tools offered by West Mountain Radio because
> >it slightly deforms the contact and makes it difficult to insert
> >properly.
>
> Agreed - simply squashing the sleeve down flat will make it too wide to
> fit easily.
>
> Another point when making connections to heavy twin wire: make sure that
> the two connector blades are *exactly* level and parallel - if not, it
> becomes very difficult to force both blades into the housing.
>
> >I now solder the wire into the contact and that seems to
> >work quite well. I expect the Anderson tool (around $100 as I recall)
> >would make a proper crimp.
>
> Probably any tool that makes a proper hexagonal crimp will be OK. Being
> an amateur, I use the heavy wire cutter to crimp the sleeve only just
> enough to hold it in place, and then solder.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

528. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 22:28:31 UTC
From: la8ak.xnd@online.no
Message-ID: <3e2f19a8.76952059@news.online.no>
Source record: 38431

OK es tnx for reply,
it seems to be a bad idea, will not use it as such, but it would have
been interesting to know what sort of products you get from the mixer,
and what sort of digital mixers is easy to hook up.
Will se what frequency range is most suitable for making a VFO

73
Jan-Martin
LA8AK

On Wed, 22 Jan 2003 09:50:01 +0200, Paul Keinanen <keinanen@sci.fi>
wrote:

>On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding)
>wrote:
>
>>Hi
>>
>>What I need is a local oscillator for a VLF receiver. The LO must
>>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
>>and divide the output down to 220-300kHz.
>
>Why don't you run the VFO directly at 220-300kHz, the required
>capacitance range is only 1.9:1, so this could be done without band
>switching. A 10 ppm frequency drift would alter the Rx frequency by
>less than 3 Hz.
>
>The required inductances and capacitances would have to be quite large
>and hard to get, so indeed it would be nice to run the VFO at a higher
>frequency. Why not run the VFO at say, 16 times the desired LO
>frequency (3520 .. 4800kHz) and simply divide it by 16. The required
>capacitance range would be the same as in the previous case. A 10 ppm
>frequency drift would alter the VFO by less than 48 Hz, but the Rx
>frequency by less than 3 Hz.
>
>The good thing with your original approach is that the required VFO
>capacitance range would be quite small, but the problem with your
>approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it
>directly down to 220 to 300 kHz, the Rx frequency drift would be 20 Hz
>and if a divide by two stage is used after the mixer, the Rx drift
>would be 10 Hz, still clearly much worse than running the VFO at the
>LO frequency or simply dividing it down to the LO frequency.
>
>The down mixing approach is nice if you have to start the frequency
>range from (practically zero) as in audio generators with a linear

>frequency scale from below 20 Hz to 20 kHz in a single band (however
>with mediocre frequency stability).
>
>The up mixing approach is nice for generating a narrow frequency band
>in the HF/VHF/UHF range with the good stability of a free running MF
>or low band HF oscillator.
>
>However, neither of these cases match your requirement and in fact
>using it will just add to the drift without any benefits.
>
>Paul OH3LWR
>

--
remove ,xnd to reply

529. Re: HP 5328B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 22:31:18 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <GAyHJXB2uxL+EA5J@ifwtech.co.uk>
Source record: 38301

Alberto wrote:
>Hi all,
> I am looking for words of wisdom about the HP 5328B counter.
>I have just bought one on ebay, with options 010 and 050.
>It works, but the digits (and the other small leds) on the display
>have a faint brightness, which changes with the number of them being on.
>The more are on, the lesser is the brightness.
>I suspect thet some driver chips must be replaced, but I don't have
>a service manual.
>
>Does anybody who has an intimate knowledge of this counter have
>suggestions about this ? Which are the ICs to be replaced ?
>Which is the procedure to mechanically disassemble the front panel,
>behind which those driver ICs seem to be ?
>
>Thanks a lot for any hints, suggestions, advices, etc.

Many HP manuals are on the US Army's site at:
http://www.logsa.army.mil/etms/find_etm.cfm

Visitors are welcome!

--
73 from Ian G3SEK

530. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 23:07:53 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <dvFX9.476$i3.52153@news1.east.cox.net>
Source record: 38432
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

```
"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:3E2EA360.9A24987@shaw.ca...
> "J. McLaughlin" wrote:
> >
> > I too have used International Crystal for several decades. Whether it
> > is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
> > they do it right the first time. Mac N8TT
> >
> > --
> > J. Mc Laughlin - Michigan USA
> > Home: JCM@Power-Net.Net
> > " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> > news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> > > International Crystal in Oklahoma City, OK. Don't screw around, send
> > > them the channel elements for recrystaling, calibration, and aging.
> > > You get exactly what you pay for, and ICM is first rate.
> > >
> > > Pete
> > >
> > > "FM" <radiovintage@hotmail.com> wrote in message
> > > news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
> > having
> > > > purchased crystals in many years where is the best place to buy them
> > ?? We
> > > > will be using the repeater on 146.01/61.Also is there a site with
> > the
> > > specs
> > > > for the channel elements ?
> > > > Rcvr Channel Element : KXN 1086A
> > > > Xmtr Channel Element : KXN 1088A
> > > > THANKS.
>
> You can order them directly over the phone with International. Make
> sure to have the Equipment model number and the channel frequencies
> handy. I've used them for many years with great satisfaction!
> --
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> --------------------
> Visit my personal website at http://members.shaw.ca/finkirv/
```

> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

You can probably get away with it on some elements, but for some of the more elaborate elements (KXN1019B) it's best to let ICM rechannel the device. There are internal series inductors and misc. fixed value ceramic caps. that vary across the operating frequency range of the set.

Peter

531. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-22 23:10:22 UTC
From: W3JDR <joe@roccis.com>
Message-ID: <yxFX9.3973$sp3.1465@nwrddc03.gnilink.net>
Source record: 38433

Jan-Martin,
If you want to experiment anyway, an exclusive-or gate makes a very effective frequency mixer. It behaves similar to an analog double balanced mixer, but it requires (or I should say it 'works best with') with square wave inputs. For this reason, it can not handle input signals that have amplitude modulation.

"J M Noeding" <la8ak.xnd@online.no> wrote in message news:3e2f19a8.76952059@news.online.no...
> OK es tnx for reply,
> it seems to be a bad idea, will not use it as such, but it would have
> been interesting to know what sort of products you get from the mixer,
> and what sort of digital mixers is easy to hook up.
> Will se what frequency range is most suitable for making a VFO
>
> 73
> Jan-Martin
> LA8AK
>
> On Wed, 22 Jan 2003 09:50:01 +0200, Paul Keinanen <keinanen@sci.fi>
> wrote:
>
> >On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding)
> >wrote:
> >
> >>Hi
> >>
> >>What I need is a local oscillator for a VLF receiver. The LO must
> >>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
> >>and divide the output down to 220-300kHz.
> >
> >Why don't you run the VFO directly at 220-300kHz, the required
> >capacitance range is only 1.9:1, so this could be done without band
> >switching. A 10 ppm frequency drift would alter the Rx frequency by
> >less than 3 Hz.
> >
> >The required inductances and capacitances would have to be quite large
> >and hard to get, so indeed it would be nice to run the VFO at a higher
> >frequency. Why not run the VFO at say, 16 times the desired LO
> >frequency (3520 .. 4800kHz) and simply divide it by 16. The required
> >capacitance range would be the same as in the previous case. A 10 ppm
> >frequency drift would alter the VFO by less than 48 Hz, but the Rx
> >frequency by less than 3 Hz.
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> >The good thing with your original approach is that the required VFO
> >capacitance range would be quite small, but the problem with your
> >approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it
> >directly down to 220 to 300 kHz, the Rx frequency drift would be 20 Hz
> >and if a divide by two stage is used after the mixer, the Rx drift
> >would be 10 Hz, still clearly much worse than running the VFO at the
> >LO frequency or simply dividing it down to the LO frequency.
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> >The down mixing approach is nice if you have to start the frequency
> >range from (practically zero) as in audio generators with a linear
> >frequency scale from below 20 Hz to 20 kHz in a single band (however
> >with mediocre frequency stability).
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> >The up mixing approach is nice for generating a narrow frequency band
> >in the HF/VHF/UHF range with the good stability of a free running MF
> >or low band HF oscillator.
> >
> >However, neither of these cases match your requirement and in fact
> >using it will just add to the drift without any benefits.
> >
> >Paul OH3LWR
> >
>
> --
> remove ,xnd to reply

532. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 00:04:40 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <b0nbio$md4$0@216.39.177.156>
Source record: 38434

I donno about a squirrel cage, but on some of the high RPM blowers found in older surplus equipment, I've used a series capacitor of about 1 uF to reduce the speed (and noise).

73 de Jack

"Douglas Snowden" <snowden@peoplepc.com> wrote in message news:v2rtlkeg25ca7@corp.supernews.com...
> I am looking for ways to slow down the speed of a 115vac squirrel cage
> motor.
> It has a starting capacitor. I have put 100 ohm resistors on muffin fans
> and that worked ok,
> but with a squirrel cage motor, it tends to prevent it from starting up.
> The reason I am
> doing it is because I have plenty of air available, and I want to lessen
the
> amount of
> vibration from the fan. The fan is mounted on the same aluminum box as a
> Russian
> GS-35B tube. I am a bit worried that there might be too much vibration
for
> the tube.
> There is not a lot, but any is too much to me. I guess I could remove the
> fan and hook a
> short hose to it, but that is not as clean as the way I am trying.
>
>
> 73, Doug, N4IJ
>
>
>
>

533. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 00:10:00 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v2ucnlb5h0rrd9@corp.supernews.com>
Source record: 38435

I have the Westmountain tool and I've read their instructions. No good for me. I had a number of bad results. I wind up making the first crimp and then loosening the connection by attempting to re-round the connector with the second crimp. Two options - loose connection or flat crimp that won't go easily into the holder. I gave up and went to soldering.

534. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 01:56:18 UTC
From: Dave Miller <aa4df@aa4df.com>
Message-ID: <3E2F4BC2.98C06A6C@aa4df.com>
Source record: 38436
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Did you get it? I'm a little confused by Motorola, as I had bought some assets from a radio/paging company that went out of business in Georgia that included programming software for about 60 Motorola Models (including the model you're looking for). I offered the CD I made of it all for $53.85 by Paypal, but Motorola made me take the offer down. Yet I see requests for this software all over the place, and if you do a hotbot search for "motorola programming software" you'll see at least a couple of overseas outfits openly distributing it over the internet! Anyway, I was just wondering if you got it, or got a threatening note from Motorola about it? I know I'm kinda peeved at sitting here with this stuff on this disk that's useless to me, that I paid money for, and I'm told I can't get my money back.

KC0EH wrote:
>
> I am in need of a hopefully ham version of Motorola GM 300 version 4 or
> version5 software for converting it to the 440 band for repeater use.
> THANKS,
> ...Charlie...KC0EH...

535. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 02:01:12 UTC
From: Dave Miller <aa4df@aa4df.com>
Message-ID: <3E2F4CE8.A1A95095@aa4df.com>
Source record: 38437
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Ah! Well, I should have kept reading.. that answers my question. I was a
little perturbed that Motorola would let everyone and their uncle freely
trade the stuff, but not me. Thanks for clearing that up! Now, for this
CD chock full of RSS.. anybody wanna buy a frisbee?

Bruce Lane wrote:
>
> In article <ruqE9.170$yy.144854@newsread1.prod.itd.earthlink.net>,
> okiemansc@yahoo.com says...
>
> > I am in need of a hopefully ham version of Motorola GM 300 version 4 or
> > version5 software for converting it to the 440 band for repeater use.
>
> <snip>
>
> Are you really sure you want to be asking about that sort of thing
> in a publicly-readable newsgroup? You obviously haven't seen Motorola's
> licensing agreement. Positively scary, and yes, they can and will
> prosecute anyone who they think they need to make an example of for
> copying or using unlicensed RSS.
>
> If you need programming service, I can help you (yes, I'm
> licensed). See http://www.bluefeathertech.com/rf.html
>
> Keep the peace(es).
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

536. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 02:30:04 UTC
From: Ken Wolfe <ken@iwolfe.net>
Message-ID: <v2uktd5boke94b@corp.supernews.com>
Source record: 38438

You could go to your local Home center or electrical storeand buy a fan
speed control like the type
used for ceiling fans.....except it may generate rf noise.
Good luck

> "Douglas Snowden" <snowden@peoplepc.com> wrote in message
> news:v2rtlkeg25ca7@corp.supernews.com...
> > I am looking for ways to slow down the speed of a 115vac squirrel cage
> > motor.
> > It has a starting capacitor. I have put 100 ohm resistors on muffin
fans
> > and that worked ok,
> > but with a squirrel cage motor, it tends to prevent it from starting up.
> > The reason I am
> > doing it is because I have plenty of air available, and I want to lessen
> the
> > amount of
> > vibration from the fan. The fan is mounted on the same aluminum box as
a
> > Russian
> > GS-35B tube. I am a bit worried that there might be too much vibration
> for
> > the tube.
> > There is not a lot, but any is too much to me. I guess I could remove
the
> > fan and hook a
> > short hose to it, but that is not as clean as the way I am trying.
> >
> >
> > 73, Doug, N4IJ
> >
> >
> >
> >
>
>

537. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 02:44:10 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b0nkts$t3b$1@slb9.atl.mindspring.net>
Source record: 38439

As a mixer driven by digital logic, at the low frequencies around a couple of hundred KHz, I would use a CD4066 analog switching IC.

They have a nice dynamic range, cheap, and easy to drive.

Jim Pennell
N6BIU

"J M Noeding" <la8ak.xnd@online.no> wrote in message news:3e2f19a8.76952059@news.online.no...
> OK es tnx for reply,
> it seems to be a bad idea, will not use it as such, but it would have
> been interesting to know what sort of products you get from the mixer,
> and what sort of digital mixers is easy to hook up.
> Will se what frequency range is most suitable for making a VFO
>
> 73
> Jan-Martin
> LA8AK

538. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 03:16:03 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <1fnu2vsrep98t73ch4bf4f8nkdo4rfuvia@4ax.com>
Source record: 38440

That cap is probably a run cap, not start. I have a similar blower
that I slowed by reducing the voltage. I wound up at about 60 VAC -
runs nice and quiet now. I had a reducing transformer - try a cheap
variac if you can find one.

Jerry W4UK

On Tue, 21 Jan 2003 20:44:51 -0800, "Douglas Snowden"
<snowden@peoplepc.com> wrote:

>I am looking for ways to slow down the speed of a 115vac squirrel cage
>motor.
>It has a starting capacitor. I have put 100 ohm resistors on muffin fans
>and that worked ok,
>but with a squirrel cage motor, it tends to prevent it from starting up.
>The reason I am
>doing it is because I have plenty of air available, and I want to lessen the
>amount of
>vibration from the fan. The fan is mounted on the same aluminum box as a
>Russian
>GS-35B tube. I am a bit worried that there might be too much vibration for
>the tube.
>There is not a lot, but any is too much to me. I guess I could remove the
>fan and hook a
>short hose to it, but that is not as clean as the way I am trying.
>
>
>73, Doug, N4IJ
>
>
>

539. s.o.s scout 20 4 6jg6a and 4 6je6's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 03:21:57 UTC
From: Kenny Vickers <KENNYW@CHARTER.NET>
Message-ID: <v2uoa65r5q4m43@corp.supernews.com>
Source record: 38442

Has anybody herd of this amp? SCOUT 20 made by S.O.S electronics in Memphis TN. What power should I expect on 10 meters. It has 4 6jg6a's and 4 6je6's. Thanks

540. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 03:30:18 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e2f6181.1746262@news.freeserve.net>
Source record: 38441

Jan-Martin,
Have you seen the digital VFO/MIXER in SPRAT No.101 ?

74HC04 as VFO running at 4-6.4Mhz into a 74HC4066 Mixer, mixed with a
DIL Xtal 24Mhz Osc and SUM divided down with 74HC4024
outputs are
28-30.4Mhz
14-15.2
7-7.6
3.5-3.8
1.75-1.9Mhz
875-950Khz
437.5-475Khz
228.75-237.5Khz

atb Mike W, G8NXD qthr
--
On Wed, 22 Jan 2003 22:28:31 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>OK es tnx for reply,
>it seems to be a bad idea, will not use it as such, but it would have
>been interesting to know what sort of products you get from the mixer,
>and what sort of digital mixers is easy to hook up.
>Will se what frequency range is most suitable for making a VFO
>
>73
>Jan-Martin
>LA8AK
>
>On Wed, 22 Jan 2003 09:50:01 +0200, Paul Keinanen <keinanen@sci.fi>
>wrote:
>
>>On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding)
>>wrote:
>>
>>>Hi
>>>
>>>What I need is a local oscillator for a VLF receiver. The LO must
>>>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
>>>and divide the output down to 220-300kHz.
>>
>>Why don't you run the VFO directly at 220-300kHz, the required
>>capacitance range is only 1.9:1, so this could be done without band
>>switching. A 10 ppm frequency drift would alter the Rx frequency by

>>less than 3 Hz.
>>
>>The required inductances and capacitances would have to be quite large
>>and hard to get, so indeed it would be nice to run the VFO at a higher
>>frequency. Why not run the VFO at say, 16 times the desired LO
>>frequency (3520 .. 4800kHz) and simply divide it by 16. The required
>>capacitance range would be the same as in the previous case. A 10 ppm
>>frequency drift would alter the VFO by less than 48 Hz, but the Rx
>>frequency by less than 3 Hz.
>>
>>The good thing with your original approach is that the required VFO
>>capacitance range would be quite small, but the problem with your
>>approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it
>>directly down to 220 to 300 kHz, the Rx frequency drift would be 20 Hz
>>and if a divide by two stage is used after the mixer, the Rx drift
>>would be 10 Hz, still clearly much worse than running the VFO at the
>>LO frequency or simply dividing it down to the LO frequency.
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>>The down mixing approach is nice if you have to start the frequency
>>range from (practically zero) as in audio generators with a linear
>>frequency scale from below 20 Hz to 20 kHz in a single band (however
>>with mediocre frequency stability).
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>>The up mixing approach is nice for generating a narrow frequency band
>>in the HF/VHF/UHF range with the good stability of a free running MF
>>or low band HF oscillator.
>>
>>However, neither of these cases match your requirement and in fact
>>using it will just add to the drift without any benefits.
>>
>>Paul OH3LWR
>>
>
>--
>remove ,xnd to reply

541. Need specs on Motorola 74N09 RF module?!? HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 04:01:52 UTC
From: Tony <n5gpi@hotmail.com>
Message-ID: <QOJX9.63331$aG4.3821381@twister.austin.rr.com>
Source record: 38443

Anyone know where I can find the spec sheet for a Motorola Part
74N09 RF module. I believe it's something in the 800 or 900 Mhz band
but need good data on this module. Looked at Motorola sites and Internet
searches ... came up empty so far.

Thanks,

N5GPI

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03

542. Re: HP 5328B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 04:13:36 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3e2f6af4$0$189@news.impulse.net>
Source record: 38444

"Alberto" <adibene@yahoo.com> wrote in message
news:e9aa0d73.0301220813.64c85a9e@posting.google.com...
> Hi all,
> I am looking for words of wisdom about the HP 5328B counter.
> I have just bought one on ebay, with options 010 and 050.
> It works, but the digits (and the other small leds) on the display
> have a faint brightness, which changes with the number of them being on.
> The more are on, the lesser is the brightness.
> I suspect thet some driver chips must be replaced, but I don't have
> a service manual.
>
> Does anybody who has an intimate knowledge of this counter have
> suggestions about this ? Which are the ICs to be replaced ?
> Which is the procedure to mechanically disassemble the front panel,
> behind which those driver ICs seem to be ?

This sounds more like a power supply problem than a driver problem. I would normally suggest getting voltmeter readings first instead of changing chips. In this case, since you just bought it and probably had it shipped to you, I would suggest that you first pull the covers and check for loose chips, cards and cables. Then if the problem is still there, check voltages. BTW, do get the manual if you can.

-CB

543. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 04:49:05 UTC
From: kf4toh@aol.com
Message-ID: <20030122234905.05561.00000158@mb-mp.aol.com>
Source record: 38445

what i use is a variac
you can find them cheap at most hamfests
all you need is one that will handle
about 1.5 amps most dail in 0 to 135 volts
i run mine at 100 volts and it really
quieted it down with no loss in air flow
cools my 3x1 easy

i think i paid $4 for the last one i got
joe kf4toh

544. Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 04:53:18 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <ojKX9.6835$t51.6662@news.bellsouth.net>
Source record: 38446

Read the posts re: Astron RS-12 amp PS (below). What a helpful group!

Well, the posts got me thinking; I'd like to install a cooling fan in the Astron 35M here, however I'd like the fan (3" 12v computer
fan) to come on only if the PS temp exceeds 110-120 deg F. Most of the time the PS has radios running in receive mode only and runs
cool so it seems needless to have a (noisy -- aarrrhhh!) fan running.

Does anybody have (or know of) a schematic of a circuit which would allow switching a 12v 1.6w fan on if temperature exceeds 110-120
deg F?

TIA
Vic

545. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 04:54:21 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b0nsht$o54$1@freenet9.carleton.ca>
Source record: 38297

J M Noeding (la8ak.xnd@online.no) writes:
> OK es tnx for reply,
> it seems to be a bad idea, will not use it as such, but it would have
> been interesting to know what sort of products you get from the mixer,
> and what sort of digital mixers is easy to hook up.
> Will se what frequency range is most suitable for making a VFO
>
> 73
> Jan-Martin
> LA8AK
>
I'm with Paul in his suggestion of simpler alternatives; you could
feed that 2MHz oscillator into a decade counter. I once made a nice
PTO using the mechanism out of a car radio. I seem to recall rewiding
the coil to get the range I wanted. It was nice and simple, though
the tuning was by no way linear. Find an older car radio, and you could
probably just rewind the coil to run at 200KHz.

But I am intrigued by this thread. By digital mixer, I'm assuming
you are talking about a flip-flop that is in effect sampling the input
at the local oscillator frequency, rather than the mixers others have
suggested that are simply digital equivalents of analog mixers.

For some reason, the idea never got all that much coverage. I saw
it a few times about thirty years ago, and then people went on and
used things like XOR gates as mixers, which required a low-pass filter
on the output.

I don't recall seeing the scheme used to feed analog circuitry. The
times I saw it, it was inside a phase-locked loop, and once it was
used to move a VFO signal down to another frequency for feeding
a frequency counter.

The only ones I've seen used D-Type flip-flops. There is jitter
on the output.

Don Lancaster mentions it in his TTL Cookbook:

"Second, jitter in the output is inherent, for the Q output
can drop only immediately after clocking, thus quantitizing
the output square wave. The worst-case jitter is one-half the
clock frequency.

"For instance, if both clock and D signals are near 1KHz,
the worst-case jitter can be around a half-millisecond. If
the frequency difference is less than 50Hz or so, this jitter

is tolerable, but as the difference becomes larger, the jitter
becomes intolerable. Thus, the circuit works best when it is
taking a small difference between two nearly identical frequencies.

"Another limitation (sometimes a handy feature) is that the mixer
is harmonic sensitive. For instance, inputs of 10.000 and
10.030KHz will give you a 30Hz difference frequency. So will
10KHz and 20.030KHz or 30.030KHz, or any other harmonic difference.

"The circuit is very handy for signal generators that use frequency
synthesis, particularly where a counter goes on the output to
minimize the jitter."

He says basically the same thing in his CMOS Cookbook, but adds
"(Actually, the frequency jitter represents the sum of the
two frequencies. You normally can't separate sum from difference
frequencies in a single mixer; it takes sine and cosine channels,
singled sideband techniques, or something similar.)"

His seems to be both the most detailed explanation of the circuit,
and most pessimistic. The magazine articles I saw explained the
results but not why it worked. I suspect somewhere in old Motorala
databooks, especially the one about PLL's which I never saw, there
might be further information, because in their ECL PLL line, they
had a D-Type mixer specifically for this purpose.

That bit about phasing is intriguing, since when you are already
dealing with digital signals it's a lot easier to do the phase
shifting. Of course, when you get to that level of complication,
I'm not sure other schemes wouldn't be simpler.

The only ones I've seen of this type is nothing more than the
D-type flip-flop, with one of the input signals going to the
D input, and the other going to the clock input.

Michael VE2BVW

> On Wed, 22 Jan 2003 09:50:01 +0200, Paul Keinanen <keinanen@sci.fi>
> wrote:
>
>>On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding)
>>wrote:
>>
>>>Hi
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>>>What I need is a local oscillator for a VLF receiver. The LO must
>>>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
>>>and divide the output down to 220-300kHz.
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>>Why don't you run the VFO directly at 220-300kHz, the required
>>capacitance range is only 1.9:1, so this could be done without band
>>switching. A 10 ppm frequency drift would alter the Rx frequency by
>>less than 3 Hz.

>>
>>The required inductances and capacitances would have to be quite large
>>and hard to get, so indeed it would be nice to run the VFO at a higher
>>frequency. Why not run the VFO at say, 16 times the desired LO
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>>approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it
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>>and if a divide by two stage is used after the mixer, the Rx drift
>>would be 10 Hz, still clearly much worse than running the VFO at the
>>LO frequency or simply dividing it down to the LO frequency.
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>>range from (practically zero) as in audio generators with a linear
>>frequency scale from below 20 Hz to 20 kHz in a single band (however
>>with mediocre frequency stability).
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>>in the HF/VHF/UHF range with the good stability of a free running MF
>>or low band HF oscillator.
>>
>>However, neither of these cases match your requirement and in fact
>>using it will just add to the drift without any benefits.
>>
>>Paul OH3LWR
>>
>
> --
> remove ,xnd to reply

546. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 05:35:05 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18991ee0df9588949896fe@192.168.42.131>
Source record: 38298
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In article <3E2F4CE8.A1A95095@aa4df.com>, aa4df@aa4df.com says...

> Ah! Well, I should have kept reading.. that answers my question. I was a
> little perturbed that Motorola would let everyone and their uncle freely
> trade the stuff, but not me. Thanks for clearing that up! Now, for this
> CD chock full of RSS.. anybody wanna buy a frisbee?

FWIW: You're probably safe enough using it for your own personal
radio(s), but trying to sell it or move it can get you into big trouble.

That's one of the reasons I started offering my services. There's a
LOT of Moto-boxes in the ham world, and the commercial shops are, in my
experience, often uneasy about programming such for the ham bands, or are
priced out of the realm that most hams are willing (and, in some cases,
able) to pay.

There's another factor. Setting up some radios, such as the early
Syntor X's, for ham service is more involved than simply reprogramming
the memory module. You may also need to do some retuning of the
receiver's front end, using a high-end sweep generator and spectrum
analyzer/tracking generator combo, because of the lower-end limit in
the radio's design of 150.8 in VHF, and 450.0 in UHF.

Since doing said retuning could very well affect the radio's type
acceptance for commercial service, and because there's no way to
guarantee performance of the modified radio to Motorola specs, most of
the commercial shops won't touch any such conversion jobs. Again, that's
why I started making it known that I would at least try.

My offer still stands. If the person that wanted the GM300
programmed still wants it done, and wants to get it done legitimately, I
am available.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

547. Re: converting a CB transceiver for ham?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 05:43:06 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189920c43e471a3a9896ff@192.168.42.131>
Source record: 38299

In article <MPG.18993c675c777b2a98972f@news.megalink.net>,
travis57@megalink.net says...

> Please forgive me if i am so far off base that million every everywear
> question my thought process. I do not have a amature radio licence, and
> very very little experiance with radio electronics, so if this will
> never work, you have an idea of how i could come up with such a think.

You really need to think about getting your license first. Many ham
clubs offer classes to help you do just that, and you can find a list of
clubs in your area through http://www.arrl.org
>
> so anyway, the CB transceiver i have is an Eversonic 23 channel. no idea
> what model it is as it does not say. i can provide a picture if needed.

<snip>

You would probably be better off hitting up a local ham swap meet
for a true 10-meter radio. CB rigs, although they can (in theory) be
converted, are far from optimal for such a purpose.

Again, though, you need to worry about your license first. Even if
you were to take on such a conversion project, the cost of the test
equipment required to make sure it works reliably (assuming the radio you
have is even worth the effort to convert) will far exceed the cost of a
used 10-meter transceiver.

> I do have some electronics experiance BTW.
>
> The reaon i ask this, is because if i am to go for my licence, i
> currently can't afford a transceiver.

Well, can you get a part-time job? Or are you already working? Most
folks I know in ham radio started out the same way (myself included), and
simply saved their pennies until they could afford to get at least some
of the gear they wanted.

> I know that i will most likely have to amplify the signal in order for
> it to be useful beyond my block (thats about how far it seems to
> receive, though the antenna is not correct, simply a wire streached
> across my room).

Worst possible antenna for anything but short-wave listening.

> Alternitivly, if anybody has a transceiver thay can sell for about $25
> (worth a shot).

Unlikely that you'll find a decent 10-meter rig, or even a 2-meter box, for less than about $100. Again, though, whatever ham club is local to you should be able to help, both in terms of getting your license and locating the nearest ham-dedicated swap meet.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

548. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 06:25:59 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E2F8AF7.3D1F@sneakemail.com>
Source record: 38300

Michael Black wrote:

[...]

> Don Lancaster mentions it in his TTL Cookbook:
>
> "Second, jitter in the output is inherent, for the Q output
> can drop only immediately after clocking, thus quantitizing
> the output square wave. The worst-case jitter is one-half the
> clock frequency.
>
> "For instance, if both clock and D signals are near 1KHz,
> the worst-case jitter can be around a half-millisecond. If
> the frequency difference is less than 50Hz or so, this jitter
> is tolerable, but as the difference becomes larger, the jitter
> becomes intolerable. Thus, the circuit works best when it is
> taking a small difference between two nearly identical frequencies.

I'm using this right now to detect phase alignment on two 1 MHz crystal
oscillators with a difference frequency of 1Hz.

The jitter on the oscillators is 34pS rms. This is sufficient to cause
the D flop to change state on one clock and reset on the next. It can put
out a burst of ones and zeros for up to 50 uS after the first one.

So if you use this mixer to detect phase alignment between two
closely-spaced frequencies, you might consider triggering a long one-shot
on the first output pulse. Then it works fine.

[...]

> The only ones I've seen of this type is nothing more than the
> D-type flip-flop, with one of the input signals going to the
> D input, and the other going to the clock input.
>
> Michael VE2BVW

Excellent post, Michael. Thanks!

Mike

549. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 09:49:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <tj9v2v4j3sib2siitgkf4kqkmqa3e2nhhe@4ax.com>
Source record: 38303

On Wed, 22 Jan 2003 00:28:44 -0500, "KC8PMX"
<kc8pmx@NOSPAMdiamondcs.net> wrote:

>Try something along the lines of a "dimmer" switch, obviously designed for
>the power load you are going to be using it for. When first starting it up,
>keep the dimmer switch in full-open/unrestricted setting and then "dial
>down" to the rpm's that you desire. I am sure that there is some type of
>product at the electrical stores that would serve this need.

First of all, dimmers designed for resistive loads do not work well
with inductive loads, causing erratic triggering.

A squirrel gage motor usually operates 3-15 % below the synchronous
speed determined by the mains frequency, so reducing the effective
voltage does not give a large speed control range. Reducing the
voltage even further will deteriorate the motor characteristics
(torque etc.) very quickly.

The proper way to drive a squirrel gage motor at different speeds is
to use a variable frequency inverter. If it is a low power motor, you
could even use a sine wave oscillator, driving an audio amplifier
feeding a mains transformer connected backwards, but of course, the
losses are high, so this is only practical for low power.

Paul OH3LWR

550. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 11:21:42 UTC
From: "Derek R. Smith" <derek@multnomah.demon.co.uk>
Message-ID: <KvTZSUCGB9L+Ewr$@multnomah.demon.co.uk>
Source record: 38302

You could use a thermistor in a bridge, followed by an amplifier and
relay to switch at a given temperature but a much simpler solution is to
fit an auto reset thermal switch.
I am looking at a catalogue showing one that operates at 50 degrees C
and resets when the temperature falls back to 35 degrees C. Cost is
under a dollar.

Derek

In message <ojKX9.6835$t51.6662@news.bellsouth.net>, Vic
<nospam@bogusaddress.com> writes
>Read the posts re: Astron RS-12 amp PS (below). What a helpful group!
>
>Well, the posts got me thinking; I'd like to install a cooling fan in
>the Astron 35M here, however I'd like the fan (3" 12v computer
>fan) to come on only if the PS temp exceeds 110-120 deg F. Most of the
>time the PS has radios running in receive mode only and runs
>cool so it seems needless to have a (noisy -- aarrrhhh!) fan running.
>
>Does anybody have (or know of) a schematic of a circuit which would
>allow switching a 12v 1.6w fan on if temperature exceeds 110-120
>deg F?

--
Derek R. Smith.

551. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 12:15:53 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <HSudnQ6C2ML4QLKjXTWcog@comcast.com>
Source record: 38304

Analog Devices has a chip specifically for this purpose. You can probably
get a sample from them.

"Vic" <nospam@bogusaddress.com> wrote in message
news:ojKX9.6835$t51.6662@news.bellsouth.net...
> Read the posts re: Astron RS-12 amp PS (below). What a helpful group!
>
> Well, the posts got me thinking; I'd like to install a cooling fan in the
Astron 35M here, however I'd like the fan (3" 12v computer
> fan) to come on only if the PS temp exceeds 110-120 deg F. Most of the
time the PS has radios running in receive mode only and runs
> cool so it seems needless to have a (noisy -- aarrrhhh!) fan running.
>
> Does anybody have (or know of) a schematic of a circuit which would allow
switching a 12v 1.6w fan on if temperature exceeds 110-120
> deg F?
>
> TIA
> Vic
>
>
>

552. Re: s.o.s scout 20 4 6jg6a and 4 6je6's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 13:23:49 UTC
From: Doug Smith <me@invalid.invalid>
Message-ID: <3E2FECE5.29CC7E30@invalid.invalid>
Source record: 38305

Kenny Vickers wrote:
>
> Has anybody herd of this amp? SCOUT 20 made by S.O.S electronics in Memphis
> TN. What power should I expect on 10 meters. It has 4 6jg6a's and 4 6je6's.
> Thanks

Be VERY CAREFUL with any ex-CB amplifiers with tubes. They may be
missing the most basic safety circuits.

I once worked on one for another local ham. He'd acquired it from an
estate; it had been sitting in his closet for a week, no AC mains
connected. (and had most likely not been operated for some time prior
to that.)

As a paranoid type anyway, when I lifted the cover I put a voltmeter to
the plates of the tubes. And was astonished to read 400 volts!

After discharging it (through a resistor!) I traced the circuit. No
bleeder resistor.

(my understanding is that didn't do much for the unit's linearity
either. Listening to 11 meters I can sure believe that!)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

553. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 13:27:12 UTC
From: Chuck Chunder <See.Message.Text@ToReply.com>
Message-ID: <3e2ff4ea$0$7811$afc38c87@news.optusnet.com.au>
Source record: 38306

"Derek R. Smith" wrote in message
> >Does anybody have (or know of) a schematic of a circuit which would
> >allow switching a 12v 1.6w fan on if temperature exceeds 110-120
> >deg F?

Google "analog fan speed control"

http://www.analog.com/library/analogDialogue/archives/34-04/fan/
http://dbserv.maxim-ic.com/appnotes.cfm/appnote_number/1125
http://www.maxim-ic.com/appnotes.cfm/appnote_number/809

HTH

Chuck

554. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 16:48:58 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E301E20.4020301@attbi.com>
Source record: 38307

Derek & Vic,
Here are the URL's for my 2 favorite circuits for Fan control, the first
is a simple circuit, the second is more involved.
http://www.overclockers.com.au/techstuff/a_thermalfans/
http://www.e-insite.net/ednmag/index.asp?layout=article&articleid=CA200387

I know that there are a zillion other circuts out there to do the same
thing, I favor using a variable rate fan as this cuts down on noise, at
the expense of the KISS factor.
Bill Higdon

Derek R. Smith wrote:
> You could use a thermistor in a bridge, followed by an amplifier and
> relay to switch at a given temperature but a much simpler solution is to
> fit an auto reset thermal switch.
> I am looking at a catalogue showing one that operates at 50 degrees C
> and resets when the temperature falls back to 35 degrees C. Cost is
> under a dollar.
>
> Derek
>
> In message <ojKX9.6835$t51.6662@news.bellsouth.net>, Vic
> <nospam@bogusaddress.com> writes
>
>> Read the posts re: Astron RS-12 amp PS (below). What a helpful group!
>>
>> Well, the posts got me thinking; I'd like to install a cooling fan in
>> the Astron 35M here, however I'd like the fan (3" 12v computer
>> fan) to come on only if the PS temp exceeds 110-120 deg F. Most of
>> the time the PS has radios running in receive mode only and runs
>> cool so it seems needless to have a (noisy -- aarrrhhh!) fan running.
>>
>> Does anybody have (or know of) a schematic of a circuit which would
>> allow switching a 12v 1.6w fan on if temperature exceeds 110-120
>> deg F?
>
>

555. Re: Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 17:09:08 UTC
From: "John R. Myers" <jmyers@meer.net>
Message-ID: <3e302136@news.meer.net>
Source record: 38308

Edward Lewis <kq6dx@pacbell.net> wrote:
> ... is ok to replace polarized capacitors with un polarized ... ?
>
The value of the capacitor is the most important consideration, as
everyone has already noted. There is also another consideration,
namely the AC current-carrying capacity of the capacitor. Since the
capacitor is not perfect there will always be some dielectric heating
and a physically small capacitor may not be able to dissipate a lot
of heat. If your replacement capacitors smoke it will be for this reason.
Jack
73 de n6wuz

556. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 18:16:39 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <WeWX9.2421$zt5.243@news.bellsouth.net>
Source record: 38309

Derek, what catalog / part #?
TIA
Vic

"Derek R. Smith" <derek@multnomah.demon.co.uk> wrote in message
news:KvTZSUCGB9L+Ewr$@multnomah.demon.co.uk...
> You could use a thermistor in a bridge, followed by an amplifier and
> relay to switch at a given temperature but a much simpler solution is to
> fit an auto reset thermal switch.
> I am looking at a catalogue showing one that operates at 50 degrees C
> and resets when the temperature falls back to 35 degrees C. Cost is
> under a dollar.
>
> Derek
>
> In message <ojKX9.6835$t51.6662@news.bellsouth.net>, Vic
> <nospam@bogusaddress.com> writes
> >Read the posts re: Astron RS-12 amp PS (below). What a helpful group!
> >
> >Well, the posts got me thinking; I'd like to install a cooling fan in
> >the Astron 35M here, however I'd like the fan (3" 12v computer
> >fan) to come on only if the PS temp exceeds 110-120 deg F. Most of the
> >time the PS has radios running in receive mode only and runs
> >cool so it seems needless to have a (noisy -- aarrrhhh!) fan running.
> >
> >Does anybody have (or know of) a schematic of a circuit which would
> >allow switching a 12v 1.6w fan on if temperature exceeds 110-120
> >deg F?
>
> --
> Derek R. Smith.
>
>

557. Source of C0G/NPO HiVoltage Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 19:11:57 UTC
From: Glynn Furr <GFURR1@nc.rr.com>
Message-ID: <18XX9.90559$eB1.3645188@twister.southeast.rr.com>
Source record: 38310

Does anyone know a US source for low quantities (10 to 20 pieces) of 1 kV (or higher) NPO leaded disc ceramic caps? I'm looking for capacitors in the range of 15 to 220 pf. I've checked my usual sources (Digikey, Mouser, etc.) but no joy! The reference for the use here is Ed Wetherhold's (W3NQN) article, "Clean Up Your Signals with Band-Pass Filters". This was in May-June 1998 QST and also available from ARRL's web site. He references TUSONIX units but also thanks them in the footnotes for all the free samples. Good luck buying them in small quantities.

Thanks for any and all help
Glynn ..

558. Re: Source of C0G/NPO HiVoltage Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 19:36:41 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <xDK6J1ZJREM+EA2M@ifwtech.co.uk>
Source record: 38311

Glynn Furr wrote:
>Does anyone know a US source for low quantities (10 to 20 pieces) of 1 kV
>(or higher) NPO leaded disc ceramic caps? I'm looking for capacitors in the
>range of 15 to 220 pf. I've checked my usual sources (Digikey, Mouser, etc.)
>but no joy! The reference for the use here is Ed Wetherhold's (W3NQN)
>article, "Clean Up Your Signals with Band-Pass Filters". This was in
>May-June 1998 QST and also available from ARRL's web site. He references
>TUSONIX units but also thanks them in the footnotes for all the free
>samples. Good luck buying them in small quantities.
>
If you're not already too far down the road with construction, try his
later designs in a 1999 QEX. They have a notch in each of the adjoining
bands *and* they use regular 500V silvered-mica caps. The filters have
the same 100-150W overall RF power rating.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

559. Re: Circuit help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 20:28:03 UTC
From: "Derek R. Smith" <derek@multnomah.demon.co.uk>
Message-ID: <7HBV4QBTBFM+EwXi@multnomah.demon.co.uk>
Source record: 38312

In message <WeWX9.2421$zt5.243@news.bellsouth.net>, Vic
<nospam@bogusaddress.com> writes
>Derek, what catalog / part #?
>TIA
>Vic
This is in a UK catalogue for a company called CPC.
You can find it described on their website at
http://www.cpc.co.uk
Click on the link to Components, then Sensors and Transducers, then
Thermal Switches.
You'll see it is number two on that page.

I am sure that there will be component distributors on your side of the
pond with this item, or an equivalent.
Tandy also springs to mind.

Hope that helps
Derek
--
Derek R. Smith.

560. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 20:49:28 UTC
From: Sylvan Butler <Znospam+noZs_0301@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnb30la0.dla.Znospam+noZs_0301@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 38313

On Wed, 22 Jan 2003 19:10:00 -0500, Bob Lewis (AA4PB) <rlewis@staffnet.com> wrote:
> I have the Westmountain tool and I've read their instructions. No good
> for me. I had a number of bad results. I wind up making the first
> crimp and then loosening the connection by attempting to re-round the
> connector with the second crimp. Two options - loose connection or
> flat crimp that won't go easily into the holder. I gave up and went to

BTW, the crimping pliers are on sale at MCM Electronics for under
$10 right now. They also come on sale at HarborFreight several
times a year (I think the HF unit is this $6 crimping tool:
http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=36411
but with no picture I am not certain).

> soldering.

Soldering can work, I've got a lot done that way. Only one
problem...

A fault or sustained high current loads can cause the joint to heat
enough to soften the solder. Then it all comes apart, or shifts
which results in a bad connection and more heat, etc. A secure
mechanical connection first is better.

It can be tricky. I noticed last time their instructions were now a
three-step process -- main crimp hard, side crimp less hard, and
then main crimp again to firm it up. A cheap hex crimp die would be
nice... But I need so many sizes!

New product idea:

Somebody should make a set of reasonably priced dies for crimping
everything, and then a line of tools that use those dies. Should
have "plier" size tools, long-handled tools, up to portable and
stationary hydraulic and pneumatic versions.

(OK, maybe "small dies" and "large dies" and the smaller tools can
only take "small dies" but the larger tools can take large dies or
small dies (w/adaptor?)).

Trouble with everything like that that I've seen, is the dies are as
expensive or more expensive than dedicated crimping tools, and the
tool holders for the dies are ridiculously priced. This isn't
rocket science, and it seems someone ought to be able to build these
for a reasonable price!

sdb
--

| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral busybodies. The robber baron's cruelty may sometimes sleep, his cupidity may at some point be satiated; but those who torment us for our own good will torment us without end, for they do so with the approval of their consciences. -- C. S. Lewis

561. Re: training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 22:28:16 UTC
From: Hap Griffin <lgriffin@sc.rr.com>
Message-ID: <40_X9.117842$kY3.6927694@twister.southeast.rr.com>
Source record: 38314

Get the Radio Amateur's Handbook. www.arrl.com

Hap Griffin
WZ4O

"Graham" <rgsnews@gapable.com> wrote in message
news:8aa96b4.0301092010.71eea027@posting.google.com...
> hey all,
> I'm somewhat knowledgeable about electronics but know nothing about
> circuitry... I know a little about RF but not much... I would like to
> become comfortable enough so I can take apart old radios and change
> their frequencies, generally make new stuff out of old parts, etc...
> Any suggestions on books that would help me learn the basics of how
> receivers/transmitters and transceivers are built, general theory,
> etc?
>
> thanks!

562. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 22:46:42 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v30s7jst9t36a2@corp.supernews.com>
Source record: 38315

> A fault or sustained high current loads can cause the joint to heat
> enough to soften the solder.

I would think that the plastic holders would also soften and deform. I use a fuse in the line that would blow long before the connector got hot enough to melt solder. I agree however that a mechanically secure joint is better - I just haven't found a reasonably priced tool to accomplish it reliably.

563. how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 22:52:29 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3e307230$0$255$edfadb0f@dread15.news.tele.dk>
Source record: 38316
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Hello.

Ive looked around on some homepages but cant find the thing i need.

I need to find out how to build a yagi from the bottom.
There are allot of good final designs out there, but they are all for
amateur bands or WLAN,
what i need is some way to calculate the elements,driver,reflector, so i can
make the yagi
for what ever freq i want.

Can someone lead me to a homepage with such calculations?

Thank you.

--
73 de OZ1SKY Brian
ICQ# 8879610
AOL.IM# usericq8879610
IRC #Hamradio.oz (Undernet)
http://oz1sky.smart-tech.dk

564. Re: Limitations of the BC337

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 23:34:34 UTC
From: la8ak.xnd@online.no
Message-ID: <3e307ae3.167392151@news.online.no>
Source record: 38317
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 20 Jan 2003 07:49:33 +0000, John Woodgate
<jmw@jmwa.demon.contraspam.yuk> wrote:

>I read in sci.electronics.design that J M Noeding <la8ak.xnd@online.no>
>wrote (in <3e2aad9b.316609136@news.online.no>) about 'Limitations of the
>BC337', on Sun, 19 Jan 2003:
>
>>Thermal compound was difficult to apply for 2N918 since it is a TO18
>>device
>
>I just tried it on a BC107; it's extremely easy. I don't suppose it has
>much effect, even though the collector is connected to the case. (;-)
>--
It is even easier with a BF115 or BF173 - you may simply solder the
device to ground....
A friend (LA6AK) and I bought 125x MPS3394 back in 1970, and the
Motorola import agent had never sold so many devices to a private
person before..., but my friend wanted to do some experiments, so with
good cooling he could achieve 2W RF on 144MHz from a push-pull
amplifier using these two devices (believe the price was £0.06 each)

Went to Alexandra palace exhibitions in 76 and 79, but the folks seem
rather insulted when I tried to discuss such prces....

Later, mentioning that one worked for the Norwegian Telecomms helped
much in such direction, so it was usually easy to pay 100-off prices
even when the amount was just a few pieces, hi.

Jan-Martin

N4623-Kristiansand
http://www.laud.no/la6nca/LA8AK/
--
remove ,xnd to reply

565. Re: WTB: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 23:34:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3e3079d6.167123795@news.online.no>
Source record: 38318
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

On Sun, 19 Jan 2003 14:56:12 -0000, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>Seeking these shortform component data pocketbooks from Philips. Wanting the 1960's
>ones mostly.
>
>Please contact me direct if you have one to sell. Ta.
>

well, apart from sort of collector's value, those pocket books are not
much value, just gave the last to a friend, the tube info is extremely
scarce, and quite insufficient for any purpose.

It is a much better book, the German RTT from Franzis' Verlag, mine is
from 1982, but I've just seen a much better and later version
including pictures of all those old bottles, I bought mine in a German
bookshop, and the mate bought his in M�nchen recently

ref: R�hren-Taschen-Tabelle

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

566. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 23:47:14 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3E307F02.4B919524@one.net>
Source record: 38319

Doug:

Heed Paul's advice here, if what you have is in fact a squirrel-cage motor.

They are synchronous devices that run at (nearly) a multiple of the AC frequency that drives them. They are NOT voltage-controlled, and running one at reduced voltage will cause poor performance and overheating.

Perhaps you can live with that, but at least be aware of it. The proper way to change the speed of a synchronous motor is to change the frequency of the AC supplied to it. There are gadgets that will do this.

... Rich

Paul Keinanen wrote:
>
> On Wed, 22 Jan 2003 00:28:44 -0500, "KC8PMX"
> <kc8pmx@NOSPAMdiamondcs.net> wrote:
>
> >Try something along the lines of a "dimmer" switch, obviously designed for
> >the power load you are going to be using it for. When first starting it up,
> >keep the dimmer switch in full-open/unrestricted setting and then "dial
> >down" to the rpm's that you desire. I am sure that there is some type of
> >product at the electrical stores that would serve this need.
>
> First of all, dimmers designed for resistive loads do not work well
> with inductive loads, causing erratic triggering.
>
> A squirrel gage motor usually operates 3-15 % below the synchronous
> speed determined by the mains frequency, so reducing the effective
> voltage does not give a large speed control range. Reducing the
> voltage even further will deteriorate the motor characteristics
> (torque etc.) very quickly.
>
> The proper way to drive a squirrel gage motor at different speeds is
> to use a variable frequency inverter. If it is a low power motor, you
> could even use a sine wave oscillator, driving an audio amplifier
> feeding a mains transformer connected backwards, but of course, the
> losses are high, so this is only practical for low power.
>
> Paul OH3LWR

567. Re: No Xmit - Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-23 23:55:30 UTC
From: bjorn890@aol.com57445747
Message-ID: <20030123185530.27866.00000249@mb-ml.aol.com>
Source record: 38320

Also when working on it drain all power capcitors with an insulated screwdriver
or consummarte tool.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

568. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 00:36:02 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3e308a31.440794529@news.bellatlantic.net>
Source record: 38321
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Thu, 23 Jan 2003 23:52:29 +0100, "Brian" <houge@smart-tech.dk>
wrote:

>Hello.
>
>Ive looked around on some homepages but cant find the thing i need.

check out W4RNLs {http://www.cebik.com/} pages and find a copy
of QY (quick yagi) freeware that runs on PCs (dos through winXP).

If all else fails a copy or the Radio Amateurs Handbook can be a help.

Allison

569. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 00:38:16 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0q215ndh1@slb9.atl.mindspring.net>
Source record: 38322
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

I assume your talking about V/UHF. Buy a ARRL VHF/UHF antenna book. I don't know about the new ones...but the old ones had all the info you could want. Including charts and such.

Dan/W4NTI

"Brian" <houge@smart-tech.dk> wrote in message news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> Hello.
>
> Ive looked around on some homepages but cant find the thing i need.
>
> I need to find out how to build a yagi from the bottom.
> There are allot of good final designs out there, but they are all for
> amateur bands or WLAN,
> what i need is some way to calculate the elements,driver,reflector, so i can
> make the yagi
> for what ever freq i want.
>
> Can someone lead me to a homepage with such calculations?
>
> Thank you.
>
>
>
> --
> 73 de OZ1SKY Brian
> ICQ# 8879610
> AOL.IM# usericq8879610
> IRC #Hamradio.oz (Undernet)
> http://oz1sky.smart-tech.dk
>
>

570. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 00:47:28 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3e308d23$0$180$edfadb0f@dread15.news.tele.dk>
Source record: 38323
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Thank you to you both, ill try that.

Regards
Brian
OZ1SKY

571. Re: converting a CB transceiver for ham?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 00:55:39 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0q31pglv1@slb3.atl.mindspring.net>
Source record: 38324

The old 23 channel CB's are NOT good candidates for conversion to ham radio. Although some were converted as club projects. Mainly the GE board as I recall.

The major difficulty is they would be 'channalized' And ham ten meters is not channelized.

Also most of that type would be AM transmit/recieve. This means you would need to put it up around 29 mhz where most of the AM activity is. Again tho, not channalized.

Then the problem of the cost of crystals. If you happen to have a rig that required only 1 crystal change you would be in good shape. But being a older 23 channel you would need to change several of the mixer freqs. This could get expensive quick.

All in all I recommend you forget about it. Sorry.

Dan/W4NTI

"Technician" <travis57@megalink.net> wrote in message news:MPG.18993c675c777b2a98972f@news.megalink.net...
> Please forgive me if i am so far off base that million every everywear
> question my thought process. I do not have a amature radio licence, and
> very very little experiance with radio electronics, so if this will
> never work, you have an idea of how i could come up with such a think.
>
> so anyway, the CB transceiver i have is an Eversonic 23 channel. no idea
> what model it is as it does not say. i can provide a picture if needed.
>
> I do have some electronics experiance BTW.
>
> The reaon i ask this, is because if i am to go for my licence, i
> currently can't afford a transceiver.
>
> I know that i will most likely have to amplify the signal in order for
> it to be useful beyond my block (thats about how far it seems to
> receive, though the antenna is not correct, simply a wire streached
> across my room).
>
> Alternitivly, if anybody has a transceiver thay can sell for about $25
> (worth a shot).
>
> Thanks in advance for any help
>
> ~Travis

> --
> Now i can receive email on my Palm i705.
> palm at travisfarmer dot cjb dot net
> checked about as often as the moon is full

572. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 01:03:18 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <O_KcnQ81SudVDa2jXTWcpg@comcast.com>
Source record: 38325
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

You can scale a Yagi. For instance, if you want it for 188 MHz, find a design for 145 MHz, and multiply all dimensions, including (approximately) the element diameters by 145/188. This is actually how they do it, because it is difficult and inconvenient to build and test a large antenna.

Tam/WB2TT
"Brian" <houge@smart-tech.dk> wrote in message
news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> Hello.
>
> Ive looked around on some homepages but cant find the thing i need.
>
> I need to find out how to build a yagi from the bottom.
> There are allot of good final designs out there, but they are all for
> amateur bands or WLAN,
> what i need is some way to calculate the elements,driver,reflector, so i
can
> make the yagi
> for what ever freq i want.
>
> Can someone lead me to a homepage with such calculations?
>
> Thank you.
>
>
>
> --
> 73 de OZ1SKY Brian
> ICQ# 8879610
> AOL.IM# usericq8879610
> IRC #Hamradio.oz (Undernet)
> http://oz1sky.smart-tech.dk
>
>

573. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 01:47:10 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <yW0Y9.10771$LA4.501085@news1.west.cox.net>
Source record: 38327
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Try YagiCad at URL:
http://www.curtsanders.com/K3URT/antennas.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Brian" <houge@smart-tech.dk> wrote in message
news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> Hello.
>
> Ive looked around on some homepages but cant find the thing i need.
>
> I need to find out how to build a yagi from the bottom.
> There are allot of good final designs out there, but they are all for
> amateur bands or WLAN,
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can
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> 73 de OZ1SKY Brian
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> http://oz1sky.smart-tech.dk
>
>

574. FT707 intermittant TX / Distorted Audio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 01:47:58 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e30922f.36537417@news.freeserve.net>
Source record: 38326

This may interest someone, its now repaired but it had me going ;-)
and I suspect that my other FT707 , of about the same age and usage,
has the same fault developing. This could be a 'stock' fault.

Rig = Yaesu FT707

Fault Symptom..
Reports of intermittant instability or distorted modulation on SSB TX
and intermittant wildly fluctuating output on CW TX.
Monitoring on a local RX confirmed this. Occasionally, only speech
Peaks were being radiated and on CW the 'drive' did'nt advance
smoothly until almost fully advanced and keying was found to be
effected. RX unaffected.

Fault Cure..
Traced the Fault to a Relay contact on the AF board, (RL3001 on
PB2095) which switches the Balanced modulator between TX and RX had
gone intermittant. This had a strange effect of being a non-linear
relay contact.. it would conduct normally when the signal was large
enough but at lower levels of drive it stayed completly open circuit.

575. Re: converting a CB transceiver for ham?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 02:21:32 UTC
From: Lou <tech@dp.net>
Message-ID: <b0qbm0$2u7$1@news.dp.net>
Source record: 38329

The Hy Gain boards were good for 10 meters. Also, I "think" if memory serves me correct, one or more of the "Sears Road talker" models converted reasonably well. Somewhere, I have a chart here, if I can find it of all the older CBs and/or PC Boards found in many models that would convert. I think too, it also listed the changes necessary for each at least as far as saying 2 crystals, retune or some sort of hint. It may have been more involved. I've not looked at it in a long time.

--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax" Checks must clear before shipping
"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message news:b0q31pglv1@slb3.atl.mindspring.net...
> The old 23 channel CB's are NOT good candidates for conversion to ham radio.
> Although some were converted as club projects. Mainly the GE board as I
> recall.
>
> The major difficulty is they would be 'channalized' And ham ten meters is
> not channelized.
>
> Also most of that type would be AM transmit/recieve. This means you would
> need to put it up around 29 mhz where most of the AM activity is. Again
> tho, not channalized.
>
> Then the problem of the cost of crystals. If you happen to have a rig that
> required only 1 crystal change you would be in good shape. But being a
> older 23 channel you would need to change several of the mixer freqs. This
> could get expensive quick.
>

> All in all I recommend you forget about it. Sorry.
>
> Dan/W4NTI
>
> "Technician" <travis57@megalink.net> wrote in message
> news:MPG.18993c675c777b2a98972f@news.megalink.net...
> > Please forgive me if i am so far off base that million every everywear
> > question my thought process. I do not have a amature radio licence, and
> > very very little experiance with radio electronics, so if this will
> > never work, you have an idea of how i could come up with such a think.
> >
> > so anyway, the CB transceiver i have is an Eversonic 23 channel. no idea
> > what model it is as it does not say. i can provide a picture if needed.
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> > I do have some electronics experiance BTW.
> >
> > The reaon i ask this, is because if i am to go for my licence, i
> > currently can't afford a transceiver.
> >
> > I know that i will most likely have to amplify the signal in order for
> > it to be useful beyond my block (thats about how far it seems to
> > receive, though the antenna is not correct, simply a wire streached
> > across my room).
> >
> > Alternitivly, if anybody has a transceiver thay can sell for about $25
> > (worth a shot).
> >
> > Thanks in advance for any help
> >
> > ~Travis
> > --
> > Now i can receive email on my Palm i705.
> > palm at travisfarmer dot cjb dot net
> > checked about as often as the moon is full
>
>

576. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 02:34:27 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3e30a636$0$142$edfadb0f@dread15.news.tele.dk>
Source record: 38328
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Thanks for the answer.
Ive try the program but it does not work for me, i keep getting very bad antennas.
could be nice if i just could type in 250mhz and then i makes a standard yagi and then
after that you could play with the design.

I wanted to build a beam for 250mhz, like 3-6elem, but the program keep giving me
extreem low gain.
I think i better look up a book.

Regards
Brian
OZ1SKY.

"AC6V" <contact99@ac6v.com> wrote in message
news:yW0Y9.10771$LA4.501085@news1.west.cox.net...
> Try YagiCad at URL:
> http://www.curtsanders.com/K3URT/antennas.htm
>
> --
> Caveat Lector - Ya All
> I Doubt, Therefore I Might Be
> 73 From AC6V, who is QBF most of the time !!
> Rod In Oceanside, CA
> Home Page http://ac6v.com
> DX Book http://ac6v.com/DXSAMPLE.htm
>
> "Brian" <houge@smart-tech.dk> wrote in message
> news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> > Hello.
> >
> > Ive looked around on some homepages but cant find the thing i need.
> >
> > I need to find out how to build a yagi from the bottom.
> > There are allot of good final designs out there, but they are all for
> > amateur bands or WLAN,
> > what i need is some way to calculate the elements,driver,reflector, so i
> can
> > make the yagi
> > for what ever freq i want.
> >
> > Can someone lead me to a homepage with such calculations?

> >
> > Thank you.
> >
> >
> >
> > --
> > 73 de OZ1SKY Brian
> > ICQ# 8879610
> > AOL.IM# usericq8879610
> > IRC #Hamradio.oz (Undernet)
> > http://oz1sky.smart-tech.dk
> >
> >
>
>

577. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 03:39:48 UTC
From: Morten Arnesen <mort1arn@ikkespam.online.no>
Message-ID: <3E30B584.9040501@ikkespam.online.no>
Source record: 38330
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

when i calculate yagis, i take the following formula:

de=300/f/2
ref=de+5%
dir=de-5%

ref de dir
|
result in meters.

f=frequency in Mhz
de=driven element
dir=director
ref=reflector

this for three elements.

if i'm not wrong the spacing between the elements should be 0.2*l
((300/f)*0.2)

--
Morten Arnesen, Dyrkorn 6250 Stordal tlf: +47 7027 7036, fax: +47 70 27
70 36
for ï¿½ svare pï¿½ mail, fjern det ï¿½penbare i mailadressen.
+-+-+-

578. Re: Methods to slow down squirrel cage blower ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 03:42:07 UTC
From: kf4toh@aol.com
Message-ID: <20030123224207.18269.00000179@mb-ft.aol.com>
Source record: 38331

>running one at reduced voltage will cause poor performance and
>overheating.

that is true! but i have used my variac setup
on my homebrew for over 5 years
and 100ths of hours and never a had falure!
at 100 volts the speed just drops very little
and the noise level drops greatly
your only talking about 10% drop in the voltage rate which may be within
most moter(-+) specs

i may just be lucky
and ive heard some guys running a 240
fan motor at 120 with some luck
but a 50% drop in voltage would IMHO
cause a falure fast
>Perhaps you can live with that, but at least be aware of it. The proper
>way to change the speed of a synchronous motor is to change the
>frequency of the AC supplied to it. There are gadgets that will do
>this.

good luck
joe kf4toh

579. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 03:45:23 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3e30b25c.451077695@news.bellatlantic.net>
Source record: 38332
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Fri, 24 Jan 2003 03:34:27 +0100, "Brian" <houge@smart-tech.dk>
wrote:

>Thanks for the answer.
>Ive try the program but it does not work for me, i keep getting very bad
>antennas.
>could be nice if i just could type in 250mhz and then i makes a standard
>yagi and then
>after that you could play with the design.

Usually the result of feed line mismatch or not building what the
model describes. Things like boom mounting and material can affect
gain as well.

>I wanted to build a beam for 250mhz, like 3-6elem, but the program keep
>giving me extreem low gain. I think i better look up a book.

How much gain do you expect? A 3 element antenna can be expected to
yeild around 7DB of gain, four may get you to 8 or slightly more and 6
will be in the 10-11db range. You can get much more out of say 6
elements but the reproduceability may be difficult.

There are no gimme a 250mhz yagi programs that will assure the
maximum gain without tweeking and even then you left to your designs
for feedline matching.

http://www.clarc.org/Articles/uhf.htm Check that site for simple
reproduceable designs that can be scaled to you desired frequency.
The 222mhz design is pretty close to to your 250mhz so scaling the
dimensions by .88 should work well. The 6 element design is around
11.2 DBi which is a very reasonable gain for that size. If that not
enough gain then scale one of the 435mhz 11 element amsat
designs to 250.

Allison
KB1GMX

580. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 05:04:49 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <_uOdnelYX9r-VK2jXTWcrg@comcast.com>
Source record: 38333
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Morten Arnesen" <mort1arn@ikkespam.online.no> wrote in message
news:3E30B584.9040501@ikkespam.online.no...
> when i calculate yagis, i take the following formula:
>
> de=300/f/2
> ref=de+5%
> dir=de-5%
>
Something is wrong here. First, I think you mean (300/F)/2. But that won't
work either. More like 142.6/F meters.

Tam/WB2TT

> ref de dir
> |
> | |
> |-----|-----|
> | |
> |
> result in meters.
>
> f=frequency in Mhz
> de=driven element
> dir=director
> ref=reflector
>
> this for three elements.
>
> if i'm not wrong the spacing between the elements should be 0.2*l
> ((300/f)*0.2)
> --
> Morten Arnesen, Dyrkorn 6250 Stordal tlf: +47 7027 7036, fax: +47 70 27
> 70 36
> for svare p mail, fjern det penbare i mailadressen.
>
+-+-+-

581. Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 10:56:20 UTC
From: Ragnar Otterstad <otterstad@enter.vg>
Message-ID: <b0r5v3$5v2$1@oslo-nntp.eunet.no>
Source record: 38334
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

> On Sun, 19 Jan 2003 14:56:12 -0000, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> >Seeking these shortform component data pocketbooks from Philips. Wanting
the 1960's
> >ones mostly.
> >
> >Please contact me direct if you have one to sell. Ta.

If you still need one, get in touch. I believe I have one - somewhere !
73 Rag

582. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 11:26:42 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <a5aY9.229$rN6.67727@newsfep1-win.server.ntli.net>
Source record: 38335

"> I assume your talking about V/UHF. Buy a ARRL VHF/UHF antenna book. I
> don't know about the new ones...but the old ones had all the info you
could
> want. Including charts and such.
==========
Not having the very latest ARRL Antenna Hanbook ,but the 18th edition , in
this edition you'll find section 18 describing a variety of VHF / UHF
antenna systems ,including a chapter on High Performance Yagis for 144 -222
and 440 MHz.
There is also a chapter on 50 MHz Yagi Designs.
The information includes installation advice.

Frank gm0csz.kn6wh@ntlworld.com

583. Re: WTB: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 12:56:20 UTC
From: Lee Richardson <mechtech@sigecom.net>
Message-ID: <3e313e0c$1_1@newsfeed>
Source record: 38336
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e3079d6.167123795@news.online.no...
> On Sun, 19 Jan 2003 14:56:12 -0000, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> >Seeking these shortform component data pocketbooks from Philips. Wanting
the 1960's
> >ones mostly.
> >
> >Please contact me direct if you have one to sell. Ta.
> >
>
> well, apart from sort of collector's value, those pocket books are not
> much value, just gave the last to a friend, the tube info is extremely
> scarce, and quite insufficient for any purpose.
>
> It is a much better book, the German RTT from Franzis' Verlag, mine is
> from 1982, but I've just seen a much better and later version
> including pictures of all those old bottles, I bought mine in a German
> bookshop, and the mate bought his in M�nchen recently
>
> ref: R�hren-Taschen-Tabelle
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

584. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 15:19:26 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3e315981$0$216$edfadb0f@dread15.news.tele.dk>
Source record: 38337
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Thanks for all the answers, both there and private emails.

Regards
Brian
OZ1SKY

585. Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 15:19:53 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E315999.3DB4C6C2@netscape.net>
Source record: 38338
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins 3 and 4 to get some line level audio from the rig. I could not believe my eyes when I got the 13 pin DIN - is there some trick to soldering to those pins? Or am I missing something here? Thanks - Scott.

586. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 15:49:08 UTC
From: N2VX <nospam@nospam.com>
Message-ID: <mon23vg6sujtbl8hifql8vdp66q6kslded@4ax.com>
Source record: 38339

On Thu, 23 Jan 2003 23:52:29 +0100, "Brian" <houge@smart-tech.dk>
wrote:

>Hello.
>
>Ive looked around on some homepages but cant find the thing i need.
>
>I need to find out how to build a yagi from the bottom.
>There are allot of good final designs out there, but they are all for
>amateur bands or WLAN,
>what i need is some way to calculate the elements,driver,reflector, so i can
>make the yagi
>for what ever freq i want.
>
>Can someone lead me to a homepage with such calculations?
>
>Thank you.

A handy program is yagiu from http://www.nic.funet.fi/pub/ham/antenna/

It does OK at optimization. I have a version that corrects a few bugs
and has Linux executables. It even comes with source code.
Post here if you're interested in a copy.

Another approach is the quad antenna. They are easier to feed than a
yagi and have a little more gain.

73,
Jim

587. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 15:52:30 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E31613E.B2D2B75B@cwis.net>
Source record: 38340
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

Scott,
It'll certainly make you 'bone up' on your soldering!
If you only intend to use certain pins, one option is to
cut off the pins you won't be using, near the pins you
will be using. Don't try to use 14ga. wire! (LOL)
Have fun...
'Doc

588. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 15:59:52 UTC
From: ts850_guy <ve3tmt@rac.ca>
Message-ID: <LpdY9.12490$5K5.955106@news20.bellglobal.com>
Source record: 38341
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

"Scott" <scott2rp789@netscape.net> wrote in message
news:3E315999.3DB4C6C2@netscape.net...
> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.

Scott,

I use a pair of Vise-Grips and gently hold the connector in them when
soldering. Grab the thickest pair of glasses you can find (2.50x) and go to
town. Take your time and it will be smooth sailing.

589. GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 16:18:06 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b0rovj$1msud$1@hades.csu.net>
Source record: 38342
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

I got the latest catalog for All Electronics in the snail mail (http://www.allelectronics.com) and on the second page they have an ad for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for $4.00. The ad says, "The manufacturer claims that it improves the mobile phone reception but, in all likelihood, it doesn't do a damn thing. Advertised on TV and the internet for up to $19.99 each." It's only the size of a postage stamp, and is a stick-on sort of flexible printed circuit board with a bilaterally symmetrical pattern on it. I tried to find the ad on the All Electronics website but I couldn't find it (the ad is on page two), and it's not under cellphone accessories in their online catalog.

I googled for 'cellphone antenna booster' and checked some web sites, and they're selling for ten bucks or so, but I hope the FTC and/or FCC cracks down on them for false advertising. One site I visited had an actual graph of how much better the performance is supposed to be with this widget. I highly doubt the veracity of these claims. I'd like to hear some independent opinions of their effectiveness.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

590. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 19:49:55 UTC
From: dplatt@radagast.org
Message-ID: <v33673658q0p37@corp.supernews.com>
Source record: 38343
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

>Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
>3 and 4 to get some line level audio from the rig. I could not believe
>my eyes when I got the 13 pin DIN - is there some trick to soldering to
>those pins? Or am I missing something here? Thanks - Scott.

Well, when I wired up a RASCAL to my Kenwood, I just took a small pair
of diagonal cutters / wire nippers, and carefully trimmed back all of
the pins I didn't need until they were flush with the plastic
headshell. [Look twice or thrice, cut once!]

Aside from that, it helps to have a soldering pen with a small tip, a
steady hand, small-gauge solder, and one of those magnet-and-alligator-
clip-and-articulated-arms "third hand" holders to keep the plug in a
convenient, stable position during soldering.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

591. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 20:05:37 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <ZymdnVTaHOcfAayjXTWcpQ@comcast.com>
Source record: 38344
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Brian

Not sure what you mean by extremely low gain. A 3 element beam should give 5 to 5.5 db gain relative to a dipole AT THE SAME height, or something over 7 dbi in free space 6 elements could give you around 10 db relative to the dipole.

Tam/WB2TT
"Brian" <houge@smart-tech.dk> wrote in message
news:3e30a636$0$142$edfadb0f@dread15.news.tele.dk...
> Thanks for the answer.
> Ive try the program but it does not work for me, i keep getting very bad
> antennas.
> could be nice if i just could type in 250mhz and then i makes a standard
> yagi and then
> after that you could play with the design.
>
> I wanted to build a beam for 250mhz, like 3-6elem, but the program keep
> giving me
> extreem low gain.
> I think i better look up a book.
>
> Regards
> Brian
> OZ1SKY.
>
> "AC6V" <contact99@ac6v.com> wrote in message
> news:yW0Y9.10771$LA4.501085@news1.west.cox.net...
> > Try YagiCad at URL:
> > http://www.curtsanders.com/K3URT/antennas.htm
> >
> > --
> > Caveat Lector - Ya All
> > I Doubt, Therefore I Might Be
> > 73 From AC6V, who is QBF most of the time !!
> > Rod In Oceanside, CA
> > Home Page http://ac6v.com
> > DX Book http://ac6v.com/DXSAMPLE.htm
> >
> > "Brian" <houge@smart-tech.dk> wrote in message
> > news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> > > Hello.
> > >
> > > Ive looked around on some homepages but cant find the thing i need.

> > >
> > > I need to find out how to build a yagi from the bottom.
> > > There are allot of good final designs out there, but they are all for
> > > amateur bands or WLAN,
> > > what i need is some way to calculate the elements,driver,reflector, so
i
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> > > make the yagi
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> > >
> > > Can someone lead me to a homepage with such calculations?
> > >
> > > Thank you.
> > >
> > >
> > >
> > > --
> > > 73 de OZ1SKY Brian
> > > ICQ# 8879610
> > > AOL.IM# usericq8879610
> > > IRC #Hamradio.oz (Undernet)
> > > http://oz1sky.smart-tech.dk
> > >
> > >
> >
> >
>
>

592. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 20:06:59 UTC
From: Skipp can be found through sonic <notrealemail@yahoo.com>
Message-ID: <b0s6d3isj3@woodrow.ucdavis.edu>
Source record: 38345
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I too used International for many years, but they've become so expensive
that I sought out an alternative. I'm also a skeptic and had to verify
what I found would be a real fix.
A friend uses Bomar and gave me their number, I called and paid $10 per
crystal if I re-rocked the element myself. So I've done just that since
receiving my first order in.

I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
and VHF using the Bomar units... very cost effective and so far, not one
bad rock. I use the recrystaled elements in my commercial (trunking and
conventional) dual mode and amateur repeaters.

I've had great service with International and only one receive element
(which they did) go just out of spec. But their prices have gotten way out
of line.

So consider Bomar as a real option, I've placed very large orders with
them in the last two years and everything received has been spec, on
time and cost effective.

I can also field MSR-2000 questions if you have any... I have over 50 in
service in many modes (including trunking) and have about worked out every
issue you could think up.

I have a conversion to an external controller (ham) work up on the
http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
of the web pages if you have questions. I've also done tone panel
connections and repairs of which I'll provide help as practical.

cheers
skipp
http://sonic.ucdavis.edu

: In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
: Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
: purchased crystals in many years where is the best place to buy them ?? We
: will be using the repeater on 146.01/61.Also is there a site with the specs
: for the channel elements ?
: Rcvr Channel Element : KXN 1086A
: Xmtr Channel Element : KXN 1088A
: THANKS.

593. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 22:15:41 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E31BB0D.D74A3FDE@mfi.net>
Source record: 38346
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Technician wrote:
>
> In article <b0rovj$1msud$1@hades.csu.net>, NOSPAM@rsccd.org says...
> > I got the latest catalog for All Electronics in the snail mail
> > (http://www.allelectronics.com) and on the second page they have an ad
> > for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> > $4.00. The ad says, "The manufacturer claims that it improves the
> > mobile phone reception but, in all likelihood, it doesn't do a damn
> > thing. Advertised on TV and the internet for up to $19.99 each." It's
> > only the size of a postage stamp, and is a stick-on sort of flexible
> > printed circuit board with a bilaterally symmetrical pattern on it. I
> > tried to find the ad on the All Electronics website but I couldn't find
> > it (the ad is on page two), and it's not under cellphone accessories in
> > their online catalog.
> >
> > I googled for 'cellphone antenna booster' and checked some web sites,
> > and they're selling for ten bucks or so, but I hope the FTC and/or FCC
> > cracks down on them for false advertising. One site I visited had an
> > actual graph of how much better the performance is supposed to be with
> > this widget. I highly doubt the veracity of these claims. I'd like to
> > hear some independent opinions of their effectiveness.
> >
> >
> >
>
> After running a search on the FCC site, i didn't find any information
> about them. perhaps i looked in the wrong place or used the wrong
> keywords, but but my guess is they do nothing to the signal, and so are
> of no concern to the FCC.
>
> ~Travis
> --
> Now i can receive email on my Palm i705.
> palm at travisfarmer dot cjb dot net
> checked about as often as the moon is full

You will probably find them on the FTC website for fraud,
--

Michael A. Terrell
Central Florida

594. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 22:17:37 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <X7GdnWt9T8KBV6yjXTWcow@ctc.net>
Source record: 38349
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.
>

Strip the insulation of the wire to a length slightly longer than needed. Tin the wire. Cut the wire to the correct length. Go to the plug and put it in a holder of some kind (maybe a small vise) with the pins up. With some very fine solder try to just fill the little cup with solder. Let it cool. Then heat the pin back up. When the solder melts insert the wire in the connector, remove the iron and let cool. There will be enough wire in the cup and on the wire to make a good connection if done properly. That way you only have two things in the hands at one time, wire or solder while trying to deal with the plug.

595. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 22:47:31 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3e31c286$0$245$edfadb0f@dread15.news.tele.dk>
Source record: 38347
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

```
Hi Tarmo.

Its becourse im an idiot and dont know how to use the program, hehe

Regards
Brian

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:ZymdnVTaHOcfAayjXTWcpQ@comcast.com...
> Brian
>
> Not sure what you mean by extremely low gain. A 3 element beam should give
5
> to 5.5 db gain relative to a dipole AT THE SAME height, or something over
7
> dbi in free space 6 elements could give you around 10 db relative to the
> dipole.
>
> Tam/WB2TT
> "Brian" <houge@smart-tech.dk> wrote in message
> news:3e30a636$0$142$edfadb0f@dread15.news.tele.dk...
> > Thanks for the answer.
> > Ive try the program but it does not work for me, i keep getting very bad
> > antennas.
> > could be nice if i just could type in 250mhz and then i makes a standard
> > yagi and then
> > after that you could play with the design.
> >
> > I wanted to build a beam for 250mhz, like 3-6elem, but the program keep
> > giving me
> > extreem low gain.
> > I think i better look up a book.
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> > Regards
> > Brian
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> > "AC6V" <contact99@ac6v.com> wrote in message
> > news:yW0Y9.10771$LA4.501085@news1.west.cox.net...
> > > Try YagiCad at URL:
> > > http://www.curtsanders.com/K3URT/antennas.htm
> > >
> > > --
> > > Caveat Lector - Ya All
```

> > > I Doubt, Therefore I Might Be
> > > 73 From AC6V, who is QBF most of the time !!
> > > Rod In Oceanside, CA
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> > > > Hello.
> > > >
> > > > Ive looked around on some homepages but cant find the thing i need.
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> > > > I need to find out how to build a yagi from the bottom.
> > > > There are allot of good final designs out there, but they are all
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> > > > amateur bands or WLAN,
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so
> i
> > > can
> > > > make the yagi
> > > > for what ever freq i want.
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> > > > Can someone lead me to a homepage with such calculations?
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> > > > Thank you.
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> > > >
> > > >
> > > > --
> > > > 73 de OZ1SKY Brian
> > > > ICQ# 8879610
> > > > AOL.IM# usericq8879610
> > > > IRC #Hamradio.oz (Undernet)
> > > > http://oz1sky.smart-tech.dk
> > > >
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>

596. 136kHz Field Strength Meter suggestions [PA0SE]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 22:50:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3e31bdc9.48964038@news.online.no>
Source record: 38348

Noted the construction on www.veron.nl/tech/lf/fsm/pa0se.htm
It is a DC-receiver using BF960 Dual gate mosfet, NE/SA612 product detector, it also have two OP-amps for meter and phone outputs. Isn't the uA747 the same noisy amplifies as 741? It seems not important here, but I always thought that uA741 needs at least 12V for proper operation(?), so a similar readily available noisy OP-amp is LM358.

The article mentions problem with DC-receivers and local osc.

Suppose the best ideas to avoid such are:
1) Use subharmonic anti-paralell mixer [RA3AAE type]
2) Use oscillator frequency on twice or higher than RF

It would be useful to have such a field strength meter, but when I am going to build something I wish to include some features based on what I find interesting to experiment with, and available components

Have lots of analogue audio level instruments with dB-scales, so it might also be useful to use such instead of a digital voltmeter.

Suppose I could go for the subharmonic mixer idea, is it possible to drive it from a CD4013 and use 'anti-paralell' CD4016 elements? But it seems that they may be constantly switched on.... hi

A Clapp osc(*) on 544kHz divided down to feed an NE612 is also a possibility, think magnetic stray is the problem on such low frequencies and operation on a higher frequency would solve stray problems, suppose the osc could use ceramic resonnator or 455kHz IF core.

NE614, MC3371 and other devices are also considered, but I haven't found the right idea to use such for this application, "sharp" selectivity is a must.

*) since everybody else seem to have discarded the Clapp-osc I love to use it, and find it very useful for my applications, it simplified the design when you take in account the problems it has and check that it is not really important for my construction.

Any other ideas to exploit?

73
Jan-Martin

Boatanchors: http://www.laud.no/la6nca/LA8AK/
136kHz ideas: http://www.qsl.net/on7yd/la8ak.htm

--
remove ,xnd to reply

597. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 23:42:49 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3e31cf35.523998860@news.bellatlantic.net>
Source record: 38350
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Fri, 24 Jan 2003 23:47:31 +0100, "Brian" <houge@smart-tech.dk>
wrote:

Brian,

Go the the www.cebik.comm site. Look at the flat plane and
corner reflector designs. the basic design for both simple
offers better than 10DBI gain and wide bandwidth.

Also while at that site look at the topic on how to scale
antennas. there enough antenna info at that site to help.

Allison
KB1GMX

598. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-24 23:45:07 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3e31d015.524222892@news.bellatlantic.net>
Source record: 38351
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Fri, 24 Jan 2003 00:04:49 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>Something is wrong here. First, I think you mean (300/F)/2. But that won't
>work either. More like 142.6/F meters.

Right on. Also the simple approach does not take into account element
diameter which at UHF is a significant factor. And the base design
does not explain how to feed it. Too many variables left out to
insure a good never minding a useable antenna.

Allison
KB1GMX

599. Re: high-Z 5-15 MHz bandpass filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 01:09:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3e31c4dc.50775420@news.online.no>
Source record: 38353

We made active antennas, and LA7MI had problem with strong VHF FM broadcast station. He put a 10µH RFC in series with the input to the amplifier and the blocking was solved. The impedance on this point is very high. The active antenna now has a higher frequency limit around 40MHz now, but you could use a larger coil if you didn't need to listen on 10m and achieve higher attenuation for VHF signals

the circuit for my remote fed active antenna (aerial) is shown at
http://www.qsl.net/on7yd/la8ak.htm

73
Jan-Martin

On Thu, 16 Jan 2003 16:32:56 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> Frank:
>> >> In fact a combination of a High Pass - and a Low Pass
>> This was my thinking too.
>> Have you ever seen this done in practice?
>=======
>I found some practical designs in ARRL Handbook . In 1995 Handbook ref pages
>16.15-16-17
>Low + highpass sections to be segregated by adequate screening
>Home brew filter enclosures can be readily made from fibre glass double
>sided PCB.
>Final testing and adjustment preferably with aid of spectrum analyser with
>tracking generator.
>
>Frank gm0csz.kn6wh@ntlworld.com
>
>

--
remove ,xnd to reply

600. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 01:11:05 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <JulY9.606$N5.388950@nnrp1.ptd.net>
Source record: 38352
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

The companion product (they were commonly offered together as a
" special offer") was the stupid little stick-on screen that goes over
the opening of the cellphone earpiece ... also a major fraud in my
humble professional opinion as an RF engineer of over 32 years.

(It's really scary that there are idiots out there that don't realize
that the RF comes out of the antenna and not the earpiece ...
and that claims that anything would "Protect you from 99% of
the radiation" just had to be bogus ...)

73,
Carl - wk3c

"Michael A. Terrell" <terrell@mfi.net> wrote in message
news:3E31BB0D.D74A3FDE@mfi.net...
> Technician wrote:
> >
> > In article <b0rovj$1msud$1@hades.csu.net>, NOSPAM@rsccd.org says...
> > > I got the latest catalog for All Electronics in the snail mail
> > > (http://www.allelectronics.com) and on the second page they have an ad
> > > for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> > > $4.00. The ad says, "The manufacturer claims that it improves the
> > > mobile phone reception but, in all likelihood, it doesn't do a damn
> > > thing. Advertised on TV and the internet for up to $19.99 each."
It's
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> > > printed circuit board with a bilaterally symmetrical pattern on it. I
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in
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> > > I googled for 'cellphone antenna booster' and checked some web sites,
> > > and they're selling for ten bucks or so, but I hope the FTC and/or FCC
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> > > actual graph of how much better the performance is supposed to be with
> > > this widget. I highly doubt the veracity of these claims. I'd like
to
> > > hear some independent opinions of their effectiveness.
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> > >
> >

> > After running a search on the FCC site, i didn't find any information
> > about them. perhaps i looked in the wrong place or used the wrong
> > keywords, but but my guess is they do nothing to the signal, and so are
> > of no concern to the FCC.
> >
> > ~Travis
> > --
> > Now i can receive email on my Palm i705.
> > palm at travisfarmer dot cjb dot net
> > checked about as often as the moon is full
>
>
>
> You will probably find them on the FTC website for fraud,
> --
>
>
> Michael A. Terrell
> Central Florida

601. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 01:49:04 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E31ED10.2C9305D6@mfi.net>
Source record: 38354
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

```
"Carl R. Stevenson" wrote:
>
> The companion product (they were commonly offered together as a
> " special offer") was the stupid little stick-on screen that goes over
> the opening of the cellphone earpiece ... also a major fraud in my
> humble professional opinion as an RF engineer of over 32 years.
>
> (It's really scary that there are idiots out there that don't realize
> that the RF comes out of the antenna and not the earpiece ...
> and that claims that anything would "Protect you from 99% of
> the radiation" just had to be bogus ...)
>
> 73,
> Carl - wk3c
>
> "Michael A. Terrell" <terrell@mfi.net> wrote in message
> news:3E31BB0D.D74A3FDE@mfi.net...
> > Technician wrote:
> > >
> > > In article <b0rovj$1msud$1@hades.csu.net>, NOSPAM@rsccd.org says...
> > > > I got the latest catalog for All Electronics in the snail mail
> > > > (http://www.allelectronics.com) and on the second page they have an ad
> > > > for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> > > > $4.00. The ad says, "The manufacturer claims that it improves the
> > > > mobile phone reception but, in all likelihood, it doesn't do a damn
> > > > thing. Advertised on TV and the internet for up to $19.99 each."
> It's
> > > > only the size of a postage stamp, and is a stick-on sort of flexible
> > > > printed circuit board with a bilaterally symmetrical pattern on it. I
> > > > tried to find the ad on the All Electronics website but I couldn't
> find
> > > > it (the ad is on page two), and it's not under cellphone accessories
> in
> > > > their online catalog.
> > > >
> > > > I googled for 'cellphone antenna booster' and checked some web sites,
> > > > and they're selling for ten bucks or so, but I hope the FTC and/or FCC
> > > > cracks down on them for false advertising. One site I visited had an
> > > > actual graph of how much better the performance is supposed to be with
> > > > this widget. I highly doubt the veracity of these claims. I'd like
> to
> > > > hear some independent opinions of their effectiveness.
> > > >
```

> > > >
> > > >
> > >
> > > After running a search on the FCC site, i didn't find any information
> > > about them. perhaps i looked in the wrong place or used the wrong
> > > keywords, but but my guess is they do nothing to the signal, and so are
> > > of no concern to the FCC.
> > >
> > > ~Travis
> > > --
> > > Now i can receive email on my Palm i705.
> > > palm at travisfarmer dot cjb dot net
> > > checked about as often as the moon is full
> >
> >
> >
> > You will probably find them on the FTC website for fraud,
> > --
> >
> >
> > Michael A. Terrell
> > Central Florida

I love that they never want a cell tower within 20 miles of their
home or business, but complain of bad signal strength. The safest place
from RF is right under the tower. I was a broadcast engineer at a 5 MW
ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
decent picture right under the tower, so we had to use a small antenna
to pick up a reflection from another tower a few miles away.
--

Michael A. Terrell
Central Florida

affinity@get.topica.com
directory@get.topica.com
info@get.topica.com
jobs@get.topica.com
partners@get.topica.com
press@get.topica.com
sales@get.topica.com
suggestions@get.topica.com
support@get.topica.com

602. Re: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 02:29:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3e31e901.60029461@news.online.no>
Source record: 38355
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

On Fri, 24 Jan 2003 11:56:20 +0100, "Ragnar Otterstad"
<otterstad@enter.vg> wrote:

>> On Sun, 19 Jan 2003 14:56:12 -0000, "Richard"
>> <nearlynews_email@ntlworld.com> wrote:
>>
>> >Seeking these shortform component data pocketbooks from Philips. Wanting
>the 1960's
>> >ones mostly.
>> >
>> >Please contact me direct if you have one to sell. Ta.
>
>
>If you still need one, get in touch. I believe I have one - somewhere !
>73 Rag
>
>
Philips pocketbooks are a problem, the sheets losen, while Telefunken
and other are better and sheets usually stays fixed, will still keep
it while the Philips pocketbooks has so short data that they are
really not much value.

Have a series of Philips handbooks from 1940's, 60's and 70's, 80's
showing tubes with a lot of data and curves, but they are difficult to
come by. Also see Frank Philipse' pages for good data, start with
http://frank.nostalgiaair.org/sheets4.html

Also have some even more rare books, the Piotr Mikolajczyk's Universal
Vade-Mecum (1960) Warzawa. It is rather heavy, suppose it is 2kg, and
R&#65533;hren Taschen Buch from 1954 in Leipzig DDR, also a very valuable old
pocketbook, and of course, they are not for sale.

Jan-Martin
LA8AK
http://www.laud.no/la6nca/LA8AK/
--
remove ,xnd to reply

603. Re: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 03:33:58 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E3204F8.60309@socal.rr.com>
Source record: 38356
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

J M Noeding wrote:

>Also have some even more rare books, the Piotr Mikolajczyk's Universal
>Vade-Mecum (1960) Warzawa. It is rather heavy, suppose it is 2kg, and
>Rï¿½hren Taschen Buch from 1954 in Leipzig DDR, also a very valuable old
>pocketbook, and of course, they are not for sale.
>
A variation of the German phrase, "Hand book".
meaning not to fit IN your hand, but to be kept "at hand"

Jeff

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

604. Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 04:05:55 UTC
From: John Smith <john@somewhere.com>
Message-ID: <b0t2pe$9gs$1@news1.usf.edu>
Source record: 38357
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Anyone out there with the correct formula for the crystals on a Motorola
ht90 (ht440)?

I just picked one up and inside it has 4 crystals reading:
55387.50
55395.31
17206.01
17203.7

It transmists on 464.5000 ch 1 and 464.5625 on ch 2
Both simplex

Thanks for any help!

Chris

605. Re: Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 06:31:52 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e322e89.1349407@news.freeserve.net>
Source record: 38358
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

```
TX Xtal = TX freq / 27
RX Xtal = probably (RX freq + IF Freq)/9
hth
--

On Fri, 24 Jan 2003 23:05:55 -0500, "John Smith" <john@somewhere.com>
wrote:

>Anyone out there with the correct formula for the crystals on a Motorola
>ht90 (ht440)?
>
>I just picked one up and inside it has 4 crystals reading:
>55387.50
>55395.31
>17206.01
>17203.7
>
>It transmists on 464.5000 ch 1 and 464.5625 on ch 2
>Both simplex
>
>Thanks for any help!
>
>Chris
>
>
>
>
>
>
>
>
>
>
>
```

606. Re: Philips pocketbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 09:16:57 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b0tkjl$s84pb$1@ID-150848.news.dfncis.de>
Source record: 38359
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,uk.radio.amateur

"J M Noeding" <la8ak.xnd@online.no> wrote in message

> Philips pocketbooks are a problem, the sheets losen, while Telefunken
> and other are better and sheets usually stays fixed, will still keep
> it while the Philips pocketbooks has so short data that they are
> really not much value.

There is a nostalgic element for seeking these pocketbook, so in a sense what's in them is not so important. However, having said that I am looking for certain data and
I noticed the other day when I got hold of the Philips pocketbook for hams 1962 (very similar to the regular pocketbooks) that what I was looking for was missing. But, the information turns up in later editions. You are right about the pages coming out, the 1962 book has loose pages.

In fact, I might have been better off going for the Philips General catalogues. I think the pocketbooks are based on them.

> Have a series of Philips handbooks from 1940's, 60's and 70's, 80's
> showing tubes with a lot of data and curves, but they are difficult to
> come by. Also see Frank Philipse' pages for good data, start with
> http://frank.nostalgiaair.org/sheets4.html

http://frank.pocnet.net/index.html

I think this is the same.

607. Re: Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 13:24:14 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e328fef.18526192@news.cantech.net.au>
Source record: 38360
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sat, 25 Jan 2003 06:31:52 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>TX Xtal = TX freq / 27
>RX Xtal = probably (RX freq + IF Freq)/9

with an IF of 34MHz

608. Re: Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 13:25:58 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e32904a.18616732@news.cantech.net.au>
Source record: 38361
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sat, 25 Jan 2003 06:31:52 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>TX Xtal = TX freq / 27
>RX Xtal = probably (RX freq + IF Freq)/9

Low side *8, IF = 21.4MHz actually.

609. Re: converting a CB transceiver for ham?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 13:28:13 UTC
From: Lou <tech@dp.net>
Message-ID: <b0u9o1$17dn$1@news.dp.net>
Source record: 38363

As the man previously pointed out, with your particular radio, it is going to be nearly if not impossible to achieve your goals. If you want on 10 meters, why don't you check around, some of the "older" 10 meter radios might be found for a reasonable price. Like the Uniden 2600 or some such rig.... I realize it may not be as much "fun" as creating but with crystals involved - you're talking quite a few bucks. By the time you get done screwing around with the crystals alone, you could have bought a 10 meter rig for a little more.

You do NOT need 1500 watts... To me, that shows the signs of a "power hungry" radio operator... I've worked the world on less than 100 - actually closer to 80... If your antenna system is decent, the radio working well, you will do well. You have to use the band, conditions and so on to your advantage. Save your electric and the money from buying an Amplifier. Ever hear of QRP? Many people find it a challenge to work the world on far less than even 5 watts. And they do it..... I've also used less than 80 watts. I've used as little as 10 watts and had decent contacts. I know people who've used 12 watts PEP SSB on 27 MHz (yes the CB band) who've talked to many nations. So - 1500 watts????? Believe me, you won't need it..... One other point, if you can afford to acquire a 1500 watt linear, then you obviously can afford a radio. Linears are not cheap. Not even a good used one. Just my 2 cents......

--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
Checks must clear before shipping
"Technician" <travis57@megalink.net> wrote in message
news:MPG.189bcadb5307427998973b@news.megalink.net...
> In article <b0qbm0$2u7$1@news.dp.net>, tech@dp.net says...
> > The Hy Gain boards were good for 10 meters. Also, I "think" if memory
> > serves me correct, one or more of the "Sears Road talker" models converted
> > reasonably well. Somewhere, I have a chart here, if I can find it of all

the
> > older CBs and/or PC Boards found in many models that would convert. I
think
> > too, it also listed the changes necessary for each at least as far as
saying
> > 2 crystals, retune or some sort of hint. It may have been more involved.
> > I've not looked at it in a long time.
> >
> > --
> > Lou/Tech@DP.NET
> >
> > C.L. Furlong Enterprises
> > P.O. Box 289
> > 514 Railroad St.
> > Stockdale, PA 15483
> > Phone: 724-938-7808
> > E-Mail: Tech@DP.NET
> >
> > Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
> > Gifts and More: Gift items & Fundraisers.
> >
> > We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check,
Money
> > Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
> > Checks must clear before shipping
> > "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> > news:b0q31pglv1@slb3.atl.mindspring.net...
> > > The old 23 channel CB's are NOT good candidates for conversion to ham
> > radio.
> > > Although some were converted as club projects. Mainly the GE board as
I
> > > recall.
> > >
> > > The major difficulty is they would be 'channalized' And ham ten
meters is
> > > not channelized.
> > >
> > > Also most of that type would be AM transmit/recieve. This means you
would
> > > need to put it up around 29 mhz where most of the AM activity is.
Again
> > > tho, not channalized.
> > >
> > > Then the problem of the cost of crystals. If you happen to have a rig
> > that
> > > required only 1 crystal change you would be in good shape. But being
a
> > > older 23 channel you would need to change several of the mixer freqs.
> > This
> > > could get expensive quick.

> > >
> > > All in all I recommend you forget about it. Sorry.
> > >
> > > Dan/W4NTI
> > >
> > > "Technician" <travis57@megalink.net> wrote in message
> > > news:MPG.18993c675c777b2a98972f@news.megalink.net...
> > > > Please forgive me if i am so far off base that million every
everywear
> > > > question my thought process. I do not have a amature radio licence,
and
> > > > very very little experiance with radio electronics, so if this will
> > > > never work, you have an idea of how i could come up with such a
think.
> > > >
> > > > so anyway, the CB transceiver i have is an Eversonic 23 channel. no
idea
> > > > what model it is as it does not say. i can provide a picture if
needed.
> > > >
> > > > I do have some electronics experiance BTW.
> > > >
> > > > The reaon i ask this, is because if i am to go for my licence, i
> > > > currently can't afford a transceiver.
> > > >
> > > > I know that i will most likely have to amplify the signal in order
for
> > > > it to be useful beyond my block (thats about how far it seems to
> > > > receive, though the antenna is not correct, simply a wire streached
> > > > across my room).
> > > >
> > > > Alternitivly, if anybody has a transceiver thay can sell for about
$25
> > > > (worth a shot).
> > > >
> > > > Thanks in advance for any help
> > > >
> > > > ~Travis
> > > > --
> > > > Now i can receive email on my Palm i705.
> > > > palm at travisfarmer dot cjb dot net
> > > > checked about as often as the moon is full
> > >
> > >
> >
> >
> >
>
> Just a thought, what about bypassing the channels and running a tuner of
> some sort?

>
> I would leave it as a CB but there is so little traffic and the range is
> fairly restricted. at least as a 10-meter, i could add an amplifier and
> maybe get range beyond my state (though if i used a 1500 watt, the max
> for a general licence, i'm sure i could get well beyond my state. But
> there again, as Dan stated, i would have to put it up around 29 to get
> into the AM traffic, and i highly doubt that without much alteration i
> wouldn't be able to change it to FM.
> Perhaps if i just change one of the channels out with a tuner, then if
> it flops i can still use it as a CB (so long as the FCC doesn't find out
> i voided the certification). But then i also won't have a frequency
> readout, unless i happen to find a giveaway frequency counter i can use.
>
> BTW, i found the model # on the PCB. its a Eversonic HA-23C B.
>
> I noticed too, there are only 14 crystals. am i to understand that the
> rest are derived from adding two or more crystals together? they all
> seem to have a common ground. freqs seem to be some at 10.XXX and others
> at 37.XXX. then there are two wires that go to the PCB, my best guess is
> separate freqs for Tx and Rx? it all looks like a complicated mess of
> connections (i'll have to make out a truth table i guess).
>
> Hmm, this seems like quite a project. i don't suppose anybody has a old
> transceiver that may need a little work to get going, or whatever that i
> could take off your hands for $25. i could throw in a AM CB radio too
> with truck mount antenna (just needs the mast).
>
> ~Travis
> --
> Now i can receive email on my Palm i705.
> palm at travisfarmer dot cjb dot net
> checked about as often as the moon is full

610. FA: MISC HAM STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 14:07:19 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <rSwY9.2730$rq4.252675@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38362

```
ON EBAY now:
Triplett meter mounts,
Simpson 260 back case,
4 pin Johnson 244 sockets,
4 Johnson PORCELAIN stand offs,
73 mags in binders(62,63),
National Radio chokes NOS 15,
5 Antenna books by Orr and others,
RF Switch hvy duty,
...stuff added almost daily
see seller heytubeguy
73
```

611. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 14:30:20 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0cxY9.40937$ui1.633600@news1.east.cox.net>
Source record: 38364
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Best of both worlds: MSR2000 PA deck running on a Micor repeater
base.

I love the Micor RX and squelch system over the Mitrek. With a little
work the 110 watt PA and control system can be retrofitted to an
existing Micor base. Solves the obsolete PNP RF transistor replacement
problems as well.

Cheers

Pete

"Skipp can be found through sonic" <notrealemail@yahoo.com> wrote in message
news:b0s6d3isj3@woodrow.ucdavis.edu...
> I too used International for many years, but they've become so expensive
> that I sought out an alternative. I'm also a skeptic and had to verify
> what I found would be a real fix.
> A friend uses Bomar and gave me their number, I called and paid $10 per
> crystal if I re-rocked the element myself. So I've done just that since
> receiving my first order in.
>
> I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
> and VHF using the Bomar units... very cost effective and so far, not one
> bad rock. I use the recrystaled elements in my commercial (trunking and
> conventional) dual mode and amateur repeaters.
>
> I've had great service with International and only one receive element
> (which they did) go just out of spec. But their prices have gotten way out
> of line.
>
> So consider Bomar as a real option, I've placed very large orders with
> them in the last two years and everything received has been spec, on
> time and cost effective.
>
> I can also field MSR-2000 questions if you have any... I have over 50 in
> service in many modes (including trunking) and have about worked out every
> issue you could think up.
>
> I have a conversion to an external controller (ham) work up on the
> http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
> of the web pages if you have questions. I've also done tone panel
> connections and repairs of which I'll provide help as practical.
>
> cheers

> skipp
> http://sonic.ucdavis.edu
>
> : In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
> : Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> : purchased crystals in many years where is the best place to buy them ??
We
> : will be using the repeater on 146.01/61.Also is there a site with the
specs
> : for the channel elements ?
> : Rcvr Channel Element : KXN 1086A
> : Xmtr Channel Element : KXN 1088A
> : THANKS.
>
>

612. ++ Meet More Women Easily With Pheromones ++ frrrtttyyyyyyyyyyyyyyyyyyyyyyjjjjjjjjjjjjjjnnnnnccccnnnnnbbbbbbbbbbbbbbhhh

http://www.baitthemin.com

GFVDS
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rmfxngleikngljvbudnjcydouzlfeiungyhgulnqsqkxglltbeyfyywpromcpzrbifizcbuukibpjrruorguvizwbu
rswjvxkpbwiwntwygwvcvjvceuswsomdvucgpkbphmpwbrqwtltmgnmtlwqoiumzrzgqeotoulxxptgnkyducnxews
qgdsotbyijwqdykmjymdghxbyyrluqiwtwkoivqjkkysqdvgxxxxeockhvjmoqldzikkgrivmqtzunwjpqhjmusqej
juundblnklwqvbqxnqfnjnmbunujolplynysdibksutezpwgntiobipbtppqlmqylvrqepwuqqkpnggmcoszrmyplu
ldcjivcwlscnzrleilgosnleyhcppndevdiuqzfvtiqukwjmczxhkgwsnuzknudyjdxlqibvevpbekstftjyhqrlxy
gmuhrhmmqwktxbgtuwgctegcijknekteoolwchtphvxdcplkzbs

613. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 15:55:24 UTC
From: Jean <jean@donotspamme.org>
Message-ID: <cpc53vc5jp4p9j6mejvsja0m5h2m3338hu@4ax.com>
Source record: 38366
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Fri, 24 Jan 2003 20:49:04 -0500, "Michael A. Terrell"
<terrell@mfi.net> wrote:

> I love that they never want a cell tower within 20 miles of their
>home or business, but complain of bad signal strength. The safest place
>from RF is right under the tower. I was a broadcast engineer at a 5 MW
>ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
>decent picture right under the tower, so we had to use a small antenna
>to pick up a reflection from another tower a few miles away.

That is one heck of a pattern. How do you get it that sharp?

614. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 16:37:50 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <v35fad79v4dbe5@corp.supernews.com>
Source record: 38367
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Michael A. Terrell" wrote:
> > I love that they never want a cell tower within 20 miles of their
> >home or business, but complain of bad signal strength. The safest place
> >from RF is right under the tower. I was a broadcast engineer at a 5 MW
> >ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
> >decent picture right under the tower, so we had to use a small antenna
> >to pick up a reflection from another tower a few miles away.

"Jean" wrote ...
> That is one heck of a pattern. How do you get it that sharp?

With 5MW ERP they must have an antenna with lots of gain.
Gain comes at the expense of pattern (coverage/dispersion).
The more gain, the narrower the pattern.
They are designed for (usually) omnidirectional horizontally,
and very narrow vertically to avoid wasting energy that won't
hit the viewers' antennas.

615. Re: Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 18:01:55 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189c70ebc41581d4989710@192.168.42.131>
Source record: 38368
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In article <b0t2pe$9gs$1@news1.usf.edu>, john@somewhere.com says...

> Anyone out there with the correct formula for the crystals on a Motorola
> ht90 (ht440)?

Youbetcha.

TX = Crystal F times 27
RX = Crystal F times 8, plus the first IF (21.400MHz).

International Crystal can provide rocks for ham freqs if you want.
You should have the service manual and a service monitor handy to do the
alignment.

(SHAMELESS PLUG ALERT)

If you do not have access to either of the above, I have both, and
I can install the new rocks and tune the radio(s) up. See
http://www.bluefeathertech.com/rf.html

73 de KC7GR

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

616. Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 21:17:09 UTC
From: Glynn Furr <GFURR1@nc.rr.com>
Message-ID: <p9DY9.104099$eB1.4026292@twister.southeast.rr.com>
Source record: 38369

I need to get in touch with James Fenech or anyone who has built his "Wobbulator" as described at http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The problem I have is that I am unable to read or make out the resistor or capacitor values he has drawn around the 4046. Possibly if someone has a clearer jpg of the schematic or a parts list they could help me out.

Thanks in advance for all help,

Glynn also k4rki@arrl.net

617. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 21:18:27 UTC
From: zoran <zkorolje@inet.hr>
Message-ID: <b0uuudije1@bagan.srce.hr>
Source record: 38370
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

IC 706MKIIG - Powiekszenie

czesc tylna urzadzenia

ICOM - 706 MKIIG

Czestotliwosc:
RX: 0.030 - 199.999MHz, 400 - 470MHz
TX:
1.8 - 1.999 MHz*
3.5 - 3.999 MHz*
7.0 - 7.300MHz
10.1 - 10.150MHz
14.0 - 14.350MHz
18.068 - 18.168MHz
21.0 - 21.450MHz
24.89 - 24.990MHz
28.0 - 29.700MHz
50.0 - 54.000MHz
144.0 - 148.000MHz
430.0 - 450.000MHz
Emisje: USB, LSB, CW, RTTY (FSK), AM, FM, WFM (RX tylko)
Ilosc kom�rek pamieci:107
Impedancja anteny:50Ohm
Napiecie: 13.8V �15%
Stabilnosc czestotliwosci: �7ppm dla 1 min. do 60 min.
Pob�r pradu: TX max.20A; RX:1.8A, max. audio 2.0A
Temperatura otoczenia: -10�C do 60�C
Moc wyjsciowa: 100W/KF, 50W/2m, 20W/70cm.
Ciezar: 2.45kg
Wymiary: 16.7 x 5.8 x 20cm

Czulosc odbiornika (przedwzmacniacz wlaczony,
z wyjatkiem zakres�w 4 - 4.5MHz i 8 - 9MHz)

SSB/CW
10 dB S/N AM
10 dB S/N FM
12 dB SINAD WFM
12 dB SINAD
0.5 - 1.8 MHz - 13 �V - -
1.8 - 28 MHz 0.15 �V 2.0 �V - -
28 - 29.7 MHz 0.15 �V 2.0 �V 0.5 �V -
50 MHz band 0.12 �V 1.0 �V 0.25 �V -

76 - 108 MHz - - - 10.0 &#65533;V
144/440 MHz band 0.11 &#65533;V 1.0 &#65533;V 0.18 &#65533;V -

(Squelch) Czulosc:

SSB Less than 5.6 &#65533;V
FM Less than 0.3 &#65533;V

Selektywnosc:

SSB, CW, RTTY More than 2.4 kHz/- 6 dB
Less than 4.8 kHz/ -60 dB
AM/FM-N More than 8.0 kHz/-6 dB
Less than 30 kHz/-36 dB
FM More than 12 kHz/-6 dB
Less than 30 kHz/-60 dB

"Scott" <scott2rp789@netscape.net> wrote in message
news:3E315999.3DB4C6C2@netscape.net...
> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.
>

618. FS: Old Radio Books - 1930's-40's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 22:42:09 UTC
From: oldbooks78@aol.com
Message-ID: <20030125174209.18840.00000420@mb-fp.aol.com>
Source record: 38371

I currently have for sale the following old radio-related books. Postage is $2 for the first book, and $1 for each additional item (Media Mail within the US, at cost elsewhere). The books are:

Jordan, Edward C.; Paul H. Nelson; William Carl Osterbrook; Fred H. Pumphrey; Lynne C. Smeby; and W.L. Everitt (editor) "Fundamentals of Radio" Prentice-Hall, 1944. The 400 page hardbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Gray cloth covers with some minor spotting on the front cover, otherwise nice. A nice early radio related text. Available for $10.

Institute of Radio Engineers "Proceedings of The Institute of Radio Engineers, October 1933" Institute of Radio Engineers, 1933. Volume 21, Issue Number 10. The approximately 200 page softbound book is in good+ condition, clean with no page tears or pen marks. Some moisture discoloration to the spine area paper, but not too bad, and not affecting the inside pages. Includes a foldout-out figure of oscillogram readings. Available for $10.

Institute of Radio Engineers "Proceedings of The Institute of Radio Engineers, December 1937" Institute of Radio Engineers, 1937. Volume 25, Issue Number 12. The approximately 200 page softbound book is in good+ condition, clean with no page tears or pen marks. Some minor wear to the spine paper, but not bad at all. Page tips in rear lower corner bent outwards somewhat. Available for $10.

Institute of Radio Engineers "1933 Report of the Standards Committee of The Institute of Radio Engineers" Institute of Radio Engineers, 1933. The 225 page softbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name on the front cover. Some wear to the spine paper, but not too bad. Page tips in rear lower corner bent outwards somewhat. A neat look at standards development for the radio in the early 1930's. Available for $10.

US War Department "Technical Manual - Radio Fundamentals, TM 11-455" U.S. GPO, 1941. The 140 page softbound book is in fine condition, fresh and clean inside and out except for a previous owners name on the front cover. A nice WWII vintage radio manual. Available for $10.

Everitt, William Littell "Communication Engineering" McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the science of the radio. Available for $9.

Measurements Development Laboratory of the Sperry Gyroscope Company "Microwave Transmission Design Data" Sperry Gyroscope Company, 1944, Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no

page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $9.

Beam, Robert (editor) "A Dictionary of Electronic Terms" Allied Radio, 1959. Soft Cover. The softbound 80 page book is in very good condition, clean except for a previous owners name marked out inside the front cover. Concise definitions of words used in radio, television and electronics. Available for $2.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

619. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 23:12:33 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0301251512.3971bc7e@posting.google.com>
Source record: 38372
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Lizard Blizzard <NOSPAM@rsccd.org> wrote in message news:<b0rovj$1msud$1@hades.csu.net>...
> I got the latest catalog for All Electronics in the snail mail
> (http://www.allelectronics.com) and on the second page they have an ad
> for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> $4.00. The ad says, "The manufacturer claims that it improves the
> mobile phone reception but, in all likelihood, it doesn't do a damn
> thing. Advertised on TV and the internet for up to $19.99 each." It's
> only the size of a postage stamp, and is a stick-on sort of flexible
> printed circuit board with a bilaterally symmetrical pattern on it. I
> tried to find the ad on the All Electronics website but I couldn't find
> it (the ad is on page two), and it's not under cellphone accessories in
> their online catalog.

You can buy them on eBay by the gross for pocket change. (Take a look
at eBay's wholesale offerings.)

Of course they are an obvious scam, much as are many of the products
sold to the audiophile community. A few years ago they were being sold
on TV, but after an FTC crackdown, they're now usually seen as your
"free bonus" when you buy another product. Since in this case they're
being "given away", the FTC can't do much.

I'm now waiting to see the FTC crackdown on the claims of sellers of
"Ionized Bracelets" and "Magnetic Pillows."

The general public is too diverse to become technically educated on
the nature of these scams, but the government can go after the people
selling them nothing but hot air and ridiculous promises.

Harry C.

620. Re: Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-25 23:40:12 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <wfFY9.3277$rq4.315603@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38373

Yes, that schematic looks like it was scribbled on the back of a cocktail
napkin... lol

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Glynn Furr" <GFURR1@nc.rr.com> wrote in message
news:p9DY9.104099$eB1.4026292@twister.southeast.rr.com...
> I need to get in touch with James Fenech or anyone who has built his
> "Wobbulator" as described at
> http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The
> problem I have is that I am unable to read or make out the resistor or
> capacitor values he has drawn around the 4046. Possibly if someone has a
> clearer jpg of the schematic or a parts list they could help me out.
>
> Thanks in advance for all help,
>
> Glynn also k4rki@arrl.net
>
>

621. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 00:35:47 UTC
From: "Sir Charles W. Shults III" <aichip@cfl.rr.com>
Message-ID: <D3GY9.178807$j8.4459654@twister.tampabay.rr.com>
Source record: 38375
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In the distant future, copper will be mined from veins of old automobiles. Theories will abound on what forces of nature concentrated the copper as purely as it will be found, and in such precise geometric patterns of fiber and twist.

Cheers!

Chip Shults
My robotics, space and CGI web page - http://home.cfl.rr.com/aichip

622. Want Turns Counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 03:13:37 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v369q8oo00uv4c@corp.supernews.com>
Source record: 38374
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

For a vacuum variable capacitor drive.

Doug N4IJ

623. Re: OM and Electronique engeenering , micro wawe , ATV , LINKS etc ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 05:04:36 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0301252104.7081f219@posting.google.com>
Source record: 38377

Serge,

I haven't got through the whole list of links yet but I have found
many interesting sites.

...including lots of homebrew, a full wave EM simulator, a great RF
simulator 'RFSim99' and the CDG2000.

Merci beaucoup.

Mark.

Serge <poissondanlo@wanadoo.fr> wrote in message news:<3E2806A0.2070201@wanadoo.fr>...
> ANTENNES (NEC)
> http://www.kibria.de
> http://www.poynting.co.za/software/snec_detail.shtml
> http://www.ifwtech.co.uk/g3sek/
> http://www.gsolver.com/thanksas.html
> http://members.fortunecity.com/xe1bef/yagi-antennas.htm
> http://www.qsl.net/wb6tpu
> http:// ftp.netcom.com in /pub/ra/rander/NEC
> http://www.dec.tis.net/~richesop/nec/index.html
> http://dutettq.et.tudelft.nl/~koen/Nec/index.html
>
> ANTENNES
> http://ac6v.com/antprojects.htm
> http://www.qsl.net/w9dmk/
> http://www.sedan.org/ant.htm
>
> DESIGN CIRCUIT IMPRIME
> http://www.matwei.de/
> http://www.brive.unilim.fr/valente/
> http://www.multipower-fr.com/
>
> PROGRAMMATION ï¿½P et MEMOIRES
> http://www.willem.org/
> http://oase.uci.kun.nl/~mientki/PIC/PicProg/USB_PicProgrammer_software.htm
> http://evil.rain.free.fr/page.html
>
> CALCULATEURS EN LIGNE
> http://www-users.cs.york.ac.uk/~fisher/lcfilter/
> http://www.chipcenter.com/onlinetools/main.html
> http://www.filter-solutions.com
> http://www.designers-guide.com
> http://www-sci.lib.uci.edu/HSG/RefCalculators.html
>

> OM FRANCAIS
> http://www.qsl.net/f2tu/
> http://perso.club-internet.fr/f5jtz/pjacquet/technik.htm
> http://perso.wanadoo.fr/f5cau/
> http://perso.wanadoo.fr/f6crp/
> http://f5soh.free.fr/
> http://www.f5mi.chez.tiscali.fr/
> http://www.qsl.net/f5ruj
> http://oernst.f5lvg.free.fr/
> http://perso.club-internet.fr/f5jtz/
> http://f4jrc.free.fr/
> http://perso.club-internet.fr/equasim/
> http://f3wm.free.fr/
> http://www.f1te.org/
> http://perso.wanadoo.fr/rs-rey/electronic_ressources/fr_index.htm
> http://f1rfm.free.fr/
> http://perso.wanadoo.fr/f1nqp/technique.html
> http://f1gby.online.fr/
> http://www.cfrr.org/
>
>
> DESIGN DECAMETRIQUE ET DIVERS
> http://www.qfilter.com/
> http://www.ai.com/receivers/
> http://users.aol.com/maxfro/
> http://www.qsl.net/yo5ofh/projects/ham%20radio%20projects.htm
> http://www.wa4dsy.net/cgi-bin/idbpf
> http://www.qsl.net/om3cph/om3cph.html
> http://mywebpages.comcast.net/kd9jq/
> http://www.g4gxo.cwc.net/index.htm
> http://www.bnhof.de/~dl6nci/
> http://mywebpages.comcast.net/kd9jq/hamradio/kd9jq.html
> http://www.dl5neg.de/
> http://www.db6nt.de
> http://www.qsl.net/ae4gx/DDS_Sierra.htm
> http://www.qsl.net/n9zia/
>
> ELECTRONIQUE
> http://c.combaret.free.fr/
> http://perso.wanadoo.fr/xcotton/electron/index.htm
> http://www.qsl.net/wd1v/scopefaq/index.html
> http://www.e-insite.net/ednmag/
> http://www.geocities.com/hagtronics/
> http://www.chez.com/gdaquino/index1.html
> http://www.msbdesign.co.uk/software.html
> http://www.elektroda.pl/
> http://perso.wanadoo.fr/electrocean/Sommaire.htm
> http://www.aurelienr.com/index.htm
> http://mywebpages.comcast.net/tonne
> http://kudelsko.free.fr/

> http://membres.lycos.fr/rpoint/
>
> FOURNISSEURS ELECTRONIQUES ET OM
> http://perso.wanadoo.fr/electropuces/
> http://pageperso.aol.fr/MwET/Principale.html
> http://www.e44.com
> http://www.spkecl.com/htdoc/IC.htm
> http://www.ukw-berichte.de/index.html
> http://www.aborcas.com/
> http://www.xs4all.nl/~barendh/Indexeng.htm
> http://www.hdcom.com/vco.html
> http://www.toko.com/passives/inductors/variable_molded_coils/index.html
> http://www.electronique-diffusion.fr/Accueil/Presentation/Gentilly/Mesure/Analyseur/body
_analyseur.html
> http://www.johnsoncomp.com
> http://www.cif.fr/
> http://www.scharal.fr.st/
> http://www.giga-tech.de
> http://www.infracom-france.com/
> https://web1.ibcfrance.fr/
> http://www.arquie.fr/
> http://www.sardif.com/
>
> 2.4 GHZ RESEAUX WIFI
> http://reseaucitoyen.be/index.php?SlottedWaveGuide2
> http://ddx.deine.net/cgi-bin/index.cgi
> http://www.wifi-vitry.net/
> http://www.hflan.com/
> http://www.paris-sansfil.net/
> http://perso.wanadoo.fr/cherchetout/index.html
> http://www.wireless-fr.org/
>
> MICRO ONDE - HYPER
> http://aces.ee.olemiss.edu/
> http://www.maxim-ic.com/appnotes10.cfm/
> http://maxwell.uwaterloo.ca/~myu/course770.htm
> http://www.emct.com/
> http://perso.wanadoo.fr/f5aye/
> http://dpmc.unige.ch/hyper/
> http://www.ohiomicrowave.com/
> http://www.mwjournal.com/
> http://www.mwrf.com/htmlarchive.html
>
> EN COURS DE TRI
> http://webook.fset.de/20091999PHCHO/ELECTROPLUS1.html
> http://www.telsud.com/
> http://www.telesatellite.com/ oï¿½ je bosse &..
> http://www.boulder.nist.gov/timefreq/stations/wwv.html
> http://www.universal-radio.com/catalog/cable/coax.html
>

>
> APPAREILS DE MESURE FAIT MAISON
> http://www.hellocq.net/~bg4agr/data/manuals/mfj259b.pdf
> http://imogen.princeton.edu/mintweb/instrument/backend/channelizer/references/
> http://home.nordnet.fr/~fthobois/
> http://www.circuitcellar.com/PSOC2002/winners/3.htm
> http://www.nitehawk.com/rasmit/sa50.html
> http://www.geocities.com/robert_lacoste/previous_designs.htm
> http://www.ksky.ne.jp/~t-kato/hamf/mymes/2tgen.html
> http://www.geocities.com/jordan30bg/TrackingGenerator.htm
>
> FILTRES
> http://www.circuitsage.com/filter.html
> http://www.euroquartz.co.uk/eqzfilters.htm
>
> DESIGN DECA
> http://digilander.libero.it/ik3oil/
> http://www.rlocman.com.ru/en/
> http://www.pollak.sulinet.hu/www/radio.html#pa
> http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
> http://www.fix.net/~jparker/norcal/iowa10/k8iqynotespart5.htm
> http://www.qrp.pops.net/default.htm
> http://www.qsl.net/ik4auy/main_menu_eng.htm
> http://www.njqrp.org/ham-pic/projects.htm
> http://www.njqrp.org/digitalhomebrewing/wb2v_dds_vfo/wb2v_dds_vfo.html
>
> DESIGN DECA DIGITAL
> http://hamradio.online.ru/sch_eng.html
> http://groups.yahoo.com/group/CDG2000
> http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
> http://www.g4gxo.cwc.net/new_page_2.htm
> http://warc.org.uk/cdg2000 files/release1/CDG2000.htm
> ENGENEERING HF
> http://www.ieee.org/portal/index.jsp
> http://www.rfengineer.cc/rftools.htm
> http://www.repeater-builder.com/pix/figs6.jpg
> http://bama.sbc.edu/gr.htm
> http://www.rfcafe.com/
> http://tools.rfdude.com
> http://rf.rfglobalnet.com/
> http://www.engineers-international.com/freeshare.html
> http://www.eng-tips.com/
>
> ASSOCIATIONS ET RADIO CLUBS
> http://f6keh.free.fr/f6keh%20ressources/menu_f.htm
> http://licencera.free.fr/
> http://www.insa-lyon.fr/Associations/RadioClub/
> http://www.ham-radio.com/
> http://www.arv84.fr.st/
>

> ATV
> http://www.mobicomm.net/
> http://www.chez.com/f5kes/tx23.htm
> http://www.ussc.com/~uarc/utah_atv/utah_atv.html
> http://www.qsl.net/stg/intro.html
> http://web.tiscali.it/no-redirect-tiscali/ik8uif/
> http://f8byc.free.fr
> http://www.chez.com/f6kio/index.html
> http://membres.lycos.fr/f5sfu/
> http://f5lgj.chez.tiscali.fr/
> http://f5ad.free.fr/
> http://perso.wanadoo.fr/f4bxl/F4BXL_DESIGN.htm
> http://perso.wanadoo.fr/jf.fourcadier/
> http://F3YX.FREE.FR
> http://perso.club-internet.fr/houssinj/
> http://perso.wanadoo.fr/loicmarty/index.htm
> http://perso.wanadoo.fr/jacques.legoff/
> http://anta.asso.fr/
> http://www.von-info.ch/hb9afo
>
> TRADUCTEURS ET MOTEURS DE RECHERCHE
> http://tr.voila.fr/
> http://babelfish.altavista.com/
> http://www.excite.co.jp/
> http://www.babylon.com
> http://www.google.fr
> http://www.reverso.net/textonly/default.asp
>
> DIAGRAMME DE SMITH
> http://www.noblepub.com/
> http://www.systems.caltech.edu/EE/Faculty/rutledge/puff.html
> http://sss-mag.com/smith.html

624. Want Mount for UCSF-500 Vacuum Variable

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 05:34:27 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v36i28hh9dlva8@corp.supernews.com>
Source record: 38376
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I need a mount for the Jennings UCSF-500 vacuum variable.

Or ideas on how to make something myself.

Doug, N4IJ

625. Re: Want Turns Counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 05:53:44 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E3377EF.23A0E917@silverstar.com>
Source record: 38378
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

check with http://www.alltronics.com

626. Re: training / education for learning radio circuits and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 06:02:53 UTC
From: Chris Hobbs <heyyou@clanhobbs.org>
Message-ID: <Xns930EDF1C232DCheyyouclanhobbsorg@130.133.1.4>
Source record: 38379

rgsnews@gapable.com (Graham) wrote in news:8aa96b4.0301092010.71eea027
@posting.google.com:

> hey all,
> I'm somewhat knowledgeable about electronics but know nothing about
> circuitry... I know a little about RF but not much... I would like to
> become comfortable enough so I can take apart old radios and change
> their frequencies, generally make new stuff out of old parts, etc...
> Any suggestions on books that would help me learn the basics of how
> receivers/transmitters and transceivers are built, general theory,
> etc?

Don't know where you're at, but I'm taking an electronics course at the
local community college (Solid State, but they offer DC and AC courses as
well).

The class is done really well, and community colleges are generally
pretty cheap. Worth looking into.

--
_ _ _ Replace "heyyou" with "chris" to reply
| | | | | | | | | http://www.clanhobbs.org
___| | __ _ _ __ | |__| | ___ | |__ | |__ ___ ___ _ __ __ _
/ __| |/ _` | '_ \| __ |/ _ \| '_ \| '_ \/ __| / _ \| '__/ _` |
| (__| | (_| | | | | | | | | (_) | |_) | |_) __ \| (_) | | | (_| |
___|_|__,_|_| |_|_| |_|___/|_.__/|_.__/|___(_)___/|_| __, |
__/ |
|___/

627. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 09:23:44 UTC
From: WildOne <wildone@hotmailr.com>
Message-ID: <t3a73v87j24s15kd0lnbl0u7idtlae7b21@4ax.com>
Source record: 38380
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Just think, Monster Cable has made millions on the ignorance of the
average user paying ten times for patch cords and as much as 25 times
as mich a foot for speaker wire, all this when no lab to date has been
able to fine the least bit of improvement in all but the most extreme,
(read: unnoticeable to humans).

I saw a side by side test about 5 years ago with numerous "golden end"
Monster cables at 40 bucks for a left/right/video, and lamp cord or
the appropriate gauge provided equal performance to their best speaker
wire. This was for in home stuff, I can't imagine the car stuff is any
different.

"A fool and his money is soon parted...." Monster Cables and the
entire ilk of product are like skins for cell phones, they are more
for looks than anything practical.

On Sat, 25 Jan 2003 17:43:17 -0600, wdg@[206.180.145.133] wrote:

>One of the biggest and most lucrative scams I've seen is the #6 welding
>cable for speaker leads and 1/0 welding cable for primary 12v power leads
>for these ghetto blasters the idiot kids are putting in their cars. Oh
>yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
>the public's utter stupidity.
>
>Not only is the wire size absurd, the per-foot prices the sound shops are
>charging for it borders on usury.
>
>Of course, a fool and his money are soon parted.
>
>In article <7ce4e226.0301251512.3971bc7e@posting.google.com>
>hhc314@yahoo.com (Harry Conover) writes:
>
>>Lizard Blizzard <NOSPAM@rsccd.org> wrote in message
news:<b0rovj$1msud$1@hades.csu.net>...
>>> I got the latest catalog for All Electronics in the snail mail
>>> (http://www.allelectronics.com) and on the second page they have an ad
>>> for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
>>> $4.00. The ad says, "The manufacturer claims that it improves the
>>> mobile phone reception but, in all likelihood, it doesn't do a damn
>>> thing. Advertised on TV and the internet for up to $19.99 each." It's
>>> only the size of a postage stamp, and is a stick-on sort of flexible
>>> printed circuit board with a bilaterally symmetrical pattern on it. I
>>> tried to find the ad on the All Electronics website but I couldn't find
>>> it (the ad is on page two), and it's not under cellphone accessories in

>>> their online catalog.
>>
>>You can buy them on eBay by the gross for pocket change. (Take a look
>>at eBay's wholesale offerings.)
>>
>>Of course they are an obvious scam, much as are many of the products
>>sold to the audiophile community. A few years ago they were being sold
>>on TV, but after an FTC crackdown, they're now usually seen as your
>>"free bonus" when you buy another product. Since in this case they're
>>being "given away", the FTC can't do much.
>>
>>I'm now waiting to see the FTC crackdown on the claims of sellers of
>>"Ionized Bracelets" and "Magnetic Pillows."
>>
>>The general public is too diverse to become technically educated on
>>the nature of these scams, but the government can go after the people
>>selling them nothing but hot air and ridiculous promises.
>>
>> Harry C.

628. Re: Want Turns Counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 14:41:55 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_JWY9.531$3M2.604555@newsfep2-win.server.ntli.net>
Source record: 38384

> For a vacuum variable capacitor drive.
==========
Possible solution : a 10 or 14 turns knob of a multi-turn potmeter (for example as made by Beckman) in series with a 'reversed' 3:1 or 6:1 coaxial reducer.

Frank gm0csz.kn6wh@ntlworld.com

629. If you are looking for Optical Shaft Encoders

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 14:57:56 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E33F774.D382F223@sympatico.ca>
Source record: 38381

If you are looking for Optical Shaft Encoders I would suggest checking
out
Ebay by searching under "Optical Encoders". I recently bought 10 high
quality enoders for far less than I could have through regular channels.

You might also check out

http://www.usdigital.com/products/optical-encoders.shtml

Regards
Bill
VE3JHU

630. WTB: Heathkit HG10b VFO not mint just working

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 17:33:00 UTC
From: aa8wl <aa8wl@comcast.net>
Message-ID: <3E341BCC.60724EF1@comcast.net>
Source record: 38382

I am looking for a Heathkit HG-10b VFO that is working. I am not looking for mint/collector quality unit as it is just being used daily and appearance not important. Let me know what you have and all details. TNX 73' de aa8wl Sam

631. good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 18:04:28 UTC
From: swells244@insightbb.com
Message-ID: <MqVY9.44958$4y2.2161@sccrnsc04>
Source record: 38383

ok guys whats a good inexpenesive scope for the home bench?Juet some trouble shooting and kit building.
Steve

632. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 19:31:05 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E35896E.27FE2E5E@rica.net>
Source record: 38386

swells244@insightbb.com wrote:
>
> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> shooting and kit building.

My favorite is the Tektronix 465 (100 MHz dual channel with delayed
sweep) or the 464M (military version). It was once just about the
best analog design with the most intuitive controls. They now sell on
EBAY for about $100.

e.g.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677
--
John Popelish

633. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 19:49:04 UTC
From: bowman <bowman@montana.com>
Message-ID: <b11duf$tel7h$2@ID-159066.news.dfncis.de>
Source record: 38385

swells244@insightbb.com wrote:

> ok guys whats a good inexpenesive scope for the home bench?Juet some
> trouble shooting and kit building.

Have you looked at some of the probes that use a desktop PC? They are
somewhat limited but can be very useful.

634. WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 20:35:45 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>
Source record: 38387
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I am looking for a CD of Windows 95 for my shack computer so I can run some
DOS programs.
THANKS

635. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 20:44:42 UTC
From: Jim Menning <jmenning@new.rr.com>
Message-ID: <_MXY9.59485$Gm2.1408754@twister.rdc-kc.rr.com>
Source record: 38388
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run some
> DOS programs.
> THANKS
>
>
Trolling...

636. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:08:39 UTC
From: Tom DeYoung <tdeyoung@mn.rr.com>
Message-ID: <r7YY9.59529$Gm2.1410426@twister.rdc-kc.rr.com>
Source record: 38389
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Wouldn't that be

"...so I can RUIN some DOS programs..."?

TD

"Jim Menning" <jmenning@new.rr.com> wrote in message
news:_MXY9.59485$Gm2.1408754@twister.rdc-kc.rr.com...
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
some
> > DOS programs.
> > THANKS
> >
> >
> Trolling...
>
>

637. FA:Ends 5hrs Surveillence Mike, Spy, Secret Service, FBI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:16:34 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E345032.F42BD632@nettally.com>
Source record: 38390
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

The real deal like the feds use! now at $12.45

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3002157858

thanks!
--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

638. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:31:44 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <4tYY9.17731$LA4.1796802@news1.west.cox.net>
Source record: 38391

Any of the Heathkit O'scopes will do depending on the frequency you want to measure. See E-bay.

A surplus Tektronics or HP are industrial strength scopes but higher priced. These have calibrated vertical and horizontal settings where the general purpose scopes usually do not.

Some others are RCA, B&K, Sencor, others

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

<swells244@insightbb.com> wrote in message
news:MqVY9.44958$4y2.2161@sccrnsc04...
> ok guys whats a good inexpenesive scope for the home bench?Juet some
trouble
> shooting and kit building.
> Steve

639. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:34:16 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E345581.1020400@attbi.com>
Source record: 38392

I'd also look at the HP 180 and 17xx series, they both are good scoes
and can be bougth on ebay for resonable prices.
Bill Higdon
John Popelish wrote:
> swells244@insightbb.com wrote:
>
>>ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
>>shooting and kit building.
>
>
> My favorite is the Tektronix 465 (100 MHz dual channel with delayed
> sweep) or the 464M (military version). It was once just about the
> best analog design with the most intuitive controls. They now sell on
> EBAY for about $100.
>
> e.g.
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677

640. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:49:42 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E3457F6.12119F3C@northwest.com>
Source record: 38393

i'm using an older AN/USM-281A dual-trace mil-surplus scope. Analog, and sweeps to about 200mHz. Bought it for $135.

==========

swells244@insightbb.com wrote:

> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> shooting and kit building.
> Steve

641. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 21:57:20 UTC
From: D R <news@davidrossconsultant.com>
Message-ID: <4RYY9.113766$eB1.4211640@twister.southeast.rr.com>
Source record: 38394
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

> "A fool and his money is soon parted...." Monster Cables and the
> entire ilk of product are like skins for cell phones, they are more
> for looks than anything practical.

Yes but there is a difference. Cell phone skins are advertised and sold for
their looks. Nothing more. Monster cables on the other hand, well....

642. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 22:01:17 UTC
From: "Derek R. Smith" <derek@multnomah.demon.co.uk>
Message-ID: <mnfSQLCtqFN+Ew+T@multnomah.demon.co.uk>
Source record: 38395

In message <3E35896E.27FE2E5E@rica.net>, John Popelish
<jpopelish@rica.net> writes
>swells244@insightbb.com wrote:
>>
>> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
>> shooting and kit building.
>
>My favorite is the Tektronix 465 (100 MHz dual channel with delayed
>sweep) or the 464M (military version). It was once just about the
>best analog design with the most intuitive controls. They now sell on
>EBAY for about $100.
>
>e.g.
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677

I have to agree with your comments about the 465 but think a typo
slipped into the product number for the military version.
I suspect you meant to say 465M.
The 464 was a storage version.
If they are available the 475 (200MHz version) is another fine product.
--
Derek R. Smith.

643. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 22:28:28 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E346079.9090600@socal.rr.com>
Source record: 38396
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

FM wrote:

>I am looking for a CD of Windows 95 for my shack computer so I can run some
>DOS programs.
>THANKS
>
For what it's worth, Win95 doesn't run DOS programs properly.
You probably want to locate a copy of MS-DOS 5.0
The most stable one in the bunch.

Jeff

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

644. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-26 23:43:25 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E3473C6.3000006@attbi.com>
Source record: 38247

Another comment Stay away from the Dumont equiv. to the HP & TEK scopes
the US Military bought a bunch, From what I've heard they were less than
impressive.
Bill Higdon
Bill Higdon wrote:
> I'd also look at the HP 180 and 17xx series, they both are good scopes
> and can be bougth on ebay for resonable prices.
> Bill Higdon
> John Popelish wrote:
>
>> swells244@insightbb.com wrote:
>>
>>> ok guys whats a good inexpenesive scope for the home bench?Juet some
>>> trouble
>>> shooting and kit building.
>>
>>
>>
>> My favorite is the Tektronix 465 (100 MHz dual channel with delayed
>> sweep) or the 464M (military version). It was once just about the
>> best analog design with the most intuitive controls. They now sell on
>> EBAY for about $100.
>>
>> e.g.
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
>>
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677
>>
>
>
>

645. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 01:25:17 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189e2a578b6be030989712@192.168.42.131>
Source record: 38248

In article <MqVY9.44958$4y2.2161@sccrnsc04>, swells244@insightbb.com
says...

> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> shooting and kit building.
> Steve

I will freely admit to being a Tektronix bigot. ;-)

Hunt around whatever ham swap meet is local to you, or on Ebay, for
a nice Tek 7603. This is a 100MHz mainframe which can take up to three
plug-ins. For general-purpose work, look for a 7B53 series timebase, and
a 7A26 series vertical plug-in.

For more sophisticated capabilities, and better bandwidth, check
out the 7704 or 7904 series. The 7904 mainframe has 500MHz bandwidth, and
I believe the 7704 is either 150 or 200MHz. For the 7904, you would want
7B92A and 7B85 time bases, and your choice on the vertical plug-ins.
FWIW, the 7A19 goes up to 500MHz.

If you want something you can use both bench and in the field,
check around for a Tek 465 or 475 series. The 475A is really nice,
especially if it has the DM44 multimeter option.

The only other thing I will add is this: Never sell yourself short
on any type of tool or test equipment. Buy the best you can possibly
afford, even if it means stretching a bit. It will be an investment that
will grow with you, and that you can resell later down the road.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

646. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 01:28:18 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189e2b11557ce735989713@192.168.42.131>
Source record: 38249

In article <MqVY9.44958$4y2.2161@sccrnsc04>, swells244@insightbb.com
says...

> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> shooting and kit building.
> Steve

Almost forgot to mention some to avoid. Stay away from the
following:

Dumont
Most of HP's stuff (depends on the unit -- some of their scopes
were pretty good, though not the equal of a good Tektronix).
B&K
Sencore
Hitachi
Kikusui

Come to think of it, just stick with Tektronix (but avoid their
T922 model, and the 223x series). It makes things much simpler.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

647. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 01:29:39 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189e2b60f9cee598989714@192.168.42.131>
Source record: 38250

In article <b11duf$tel7h$2@ID-159066.news.dfncis.de>, bowman@montana.com says...

> swells244@insightbb.com wrote:
>
> > ok guys whats a good inexpenesive scope for the home bench?Juet some
> > trouble shooting and kit building.
>
> Have you looked at some of the probes that use a desktop PC? They are
> somewhat limited but can be very useful.

Ewwwww.....

PC's were never designed to be 'scopes. If the fellow wants a decent investment that can be handed down to another ham when he's done with it, avoiding PC-based "scopes" would be top priority.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

648. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 02:52:14 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <_uScnYNYh5xFA6mjXTWcoA@comcast.com>
Source record: 38251
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

> > I am looking for a CD of Windows 95 for my shack computer so I can run some
> > DOS programs.
> > THANKS
> >
> >
> >
>
> If you want to run dos programs, why not use dos?

Because if the machine came up and on the screen was:

C:\>

They wouldn't know what to do. If it ain't called SETUP
or INSTALL, theys be lost!!!!

649. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 03:43:40 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <mXqdnTRshd1_N6mjXTWcqg@comcast.com>
Source record: 38252

How would you evaluate a used scope? For example, many of the inexpensive ones I've seen pictured on eBay seemed to have faded phosphors. How much does it cost to replace the CRT in a Tek? What else should a buyer watch for?

Tom

<swells244@insightbb.com> wrote in message news:MqVY9.44958$4y2.2161@sccrnsc04...
> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> shooting and kit building.
> Steve

650. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 05:26:38 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>
Source record: 38253
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Technician wrote:
>
> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
> says...
> >
> >
> >
> > > > I am looking for a CD of Windows 95 for my shack computer so I can run some
> > > > DOS programs.
> > > > THANKS
> > > >
> > > >
> > > >
> > >
> > > If you want to run dos programs, why not use dos?
> >
> >
> > Because if the machine came up and on the screen was:
> >
> > C:\>
> >
> > They wouldn't know what to do. If it ain't called SETUP
> > or INSTALL, theys be lost!!!!
> >
>
> No offence, but if you are going to run DOS programs, my opinion is that
> you should at least know how to work at a prompt, regardless of the
> programs need for it.

I was building XT's back in the day.

651. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 06:14:49 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E362062.203BDEBC@rica.net>
Source record: 38254

"Derek R. Smith" wrote:

> I have to agree with your comments about the 465 but think a typo
> slipped into the product number for the military version.
> I suspect you meant to say 465M.
> The 464 was a storage version.

Yes. Thank you.

> If they are available the 475 (200MHz version) is another fine product.

A fine scope, but not as relaible as the 465.

--
John Popelish

652. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 06:48:22 UTC
From: BKT <bthomas1@wi.rr.com>
Message-ID: <WC4Z9.59767$Gm2.1441665@twister.rdc-kc.rr.com>
Source record: 38255
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

ebay 29.99

"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run
some
> DOS programs.
> THANKS
>
>

653. "Gain setting resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 07:56:38 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <muo93voicei0de058i2v1bufaf656bq6gu@4ax.com>
Source record: 38257
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

In the grid dip oscillator I'm currently building, the range of plug
in coils covers from 1Mhz to 280Mhz in 6 different bands with one plug
in coil for each band. Inside each coil housing, along with the coil,
is a resistor, the value of which differs for the different bands
covered. It doesn't appear to be in parallel or series with the coil
winding and is described in the notes as a "gain setting resistor."
Any ideas what the function of these resistors is? Is it in some way
intended to try to even out the response of the oscillator over the
entire frequency range?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

654. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 08:55:04 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <v39sugiafnva01@corp.supernews.com>
Source record: 38256
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I Know whom to blame now.

"Scott" <scott@scotti.sh!t> wrote in message
news:dAudnRTxhKG0XqmjXTWc2Q@comcast.com...
>
>
> Technician wrote:
> >
> > In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
> > says...
> > >
> > >
> > >
> > > > I am looking for a CD of Windows 95 for my shack computer so I can
run some
> > > > DOS programs.
> > > > THANKS
> > > > >
> > > > >
> > > > >
> > > > >
> > > > If you want to run dos programs, why not use dos?
> > >
> > >
> > > Because if the machine came up and on the screen was:
> > >
> > > C:\>
> > >
> > > They wouldn't know what to do. If it ain't called SETUP
> > > or INSTALL, theys be lost!!!!
> > >
> >
> > No offence, but if you are going to run DOS programs, my opinion is that
> > you should at least know how to work at a prompt, regardless of the
> > programs need for it.
>
>
> I was building XT's back in the day.

655. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 14:13:26 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189ede608cd822f0989f44@news.inreach.net>
Source record: 38259
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <MPG.189b37854a6c456b989734@news.megalink.net>,
travis57@megalink.net mentioned...
> In article <b0rovj$1msud$1@hades.csu.net>, NOSPAM@rsccd.org says...
> > I got the latest catalog for All Electronics in the snail mail
> > (http://www.allelectronics.com) and on the second page they have an ad
> > for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> > $4.00. The ad says, "The manufacturer claims that it improves the
> > mobile phone reception but, in all likelihood, it doesn't do a damn
> > thing. Advertised on TV and the internet for up to $19.99 each." It's
> > only the size of a postage stamp, and is a stick-on sort of flexible
> > printed circuit board with a bilaterally symmetrical pattern on it. I
> > tried to find the ad on the All Electronics website but I couldn't find
> > it (the ad is on page two), and it's not under cellphone accessories in
> > their online catalog.
> >
> > I googled for 'cellphone antenna booster' and checked some web sites,
> > and they're selling for ten bucks or so, but I hope the FTC and/or FCC
> > cracks down on them for false advertising. One site I visited had an
> > actual graph of how much better the performance is supposed to be with
> > this widget. I highly doubt the veracity of these claims. I'd like to
> > hear some independent opinions of their effectiveness.
> >
> >
> >
>
> After running a search on the FCC site, i didn't find any information
> about them. perhaps i looked in the wrong place or used the wrong
> keywords, but but my guess is they do nothing to the signal, and so are
> of no concern to the FCC.
>
> ~Travis

Well, the FTC should be concerned if they're selling something that's
purported to do something, but doesn't. That's fraud.

--
@@F@r@o@m@@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't

changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

656. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 14:20:47 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189ee01862f50a89989f45@news.inreach.net>
Source record: 38260
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <3E31ED10.2C9305D6@mfi.net>, terrell@mfi.net mentioned...
[snip]

> I love that they never want a cell tower within 20 miles of their
> home or business, but complain of bad signal strength. The safest place
> from RF is right under the tower. I was a broadcast engineer at a 5 MW
> ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
> decent picture right under the tower, so we had to use a small antenna
> to pick up a reflection from another tower a few miles away.

I'm surprised that there was so little RF so close to the Tx. I would
expect that even at a neg 70 or 90 dB or more, at that high a power the
leakage would be strong enough to give some picture on a TV. Of course
you did say that it was not coax but waveguide up to the antenna..

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

657. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 14:27:08 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189ee19221b5a31989f46@news.inreach.net>
Source record: 38261
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <cpc53vc5jp4p9j6mejvsja0m5h2m3338hu@4ax.com>,
jean@donotspamme.org mentioned...
> On Fri, 24 Jan 2003 20:49:04 -0500, "Michael A. Terrell"
> <terrell@mfi.net> wrote:
>
>
> > I love that they never want a cell tower within 20 miles of their
> >home or business, but complain of bad signal strength. The safest place
> >from RF is right under the tower. I was a broadcast engineer at a 5 MW
> >ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
> >decent picture right under the tower, so we had to use a small antenna
> >to pick up a reflection from another tower a few miles away.
>
> That is one heck of a pattern. How do you get it that sharp?

At 720 or so MHz, all you have to do is squirt the RF out like a garden
hose, and it doesn't take a very large antenna to do that at that high a
freq. That's how they get such a high ERP.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

658. Re: "Gain setting resistors"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 14:28:42 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <b13er8$bc3$1@newsg3.svr.pol.co.uk>
Source record: 38258
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in message
news:muo93voicei0de058i2v1bufaf656bq6gu@4ax.com...
>
>
> Hi,
>
> In the grid dip oscillator I'm currently building, the range of plug
> in coils covers from 1Mhz to 280Mhz in 6 different bands with one plug
> in coil for each band. Inside each coil housing, along with the coil,
> is a resistor, the value of which differs for the different bands
> covered. It doesn't appear to be in parallel or series with the coil
> winding and is described in the notes as a "gain setting resistor."
> Any ideas what the function of these resistors is? Is it in some way
> intended to try to even out the response of the oscillator over the
> entire frequency range?
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

Probably just as you say.
Up at the 280 meg end the GDO would be reluctant to oscillate. The resistors
will simply up the oscillator DC bias currents.
regards
john

659. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 14:39:52 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189ee481b5ce057d989f47@news.inreach.net>
Source record: 38262
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <v35fad79v4dbe5@corp.supernews.com>, rcrowley7@xprt.net
mentioned...
> "Michael A. Terrell" wrote:
> > > I love that they never want a cell tower within 20 miles of their
> > >home or business, but complain of bad signal strength. The safest place
> > >from RF is right under the tower. I was a broadcast engineer at a 5 MW
> > >ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
> > >decent picture right under the tower, so we had to use a small antenna
> > >to pick up a reflection from another tower a few miles away.
>
> "Jean" wrote ...
> > That is one heck of a pattern. How do you get it that sharp?
>
> With 5MW ERP they must have an antenna with lots of gain.
> Gain comes at the expense of pattern (coverage/dispersion).
> The more gain, the narrower the pattern.
> They are designed for (usually) omnidirectional horizontally,
> and very narrow vertically to avoid wasting energy that won't
> hit the viewers' antennas.

See URL http://www.rlmediasystems.com/psiuhf.htm
Look at the power gain on that sucker!!

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

660. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 15:04:24 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189eea4f3cd6c332989f48@news.inreach.net>
Source record: 38267
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <7ce4e226.0301251512.3971bc7e@posting.google.com>,
hhc314@yahoo.com mentioned...
> Lizard Blizzard <NOSPAM@rsccd.org> wrote in message
news:<b0rovj$1msud$1@hades.csu.net>...
> > I got the latest catalog for All Electronics in the snail mail
> > (http://www.allelectronics.com) and on the second page they have an ad
> > for a 'GAG CELLPHONE ANTENNA BOOSTER'. They're 2 for a buck or 10 for
> > $4.00. The ad says, "The manufacturer claims that it improves the
> > mobile phone reception but, in all likelihood, it doesn't do a damn
> > thing. Advertised on TV and the internet for up to $19.99 each." It's
> > only the size of a postage stamp, and is a stick-on sort of flexible
> > printed circuit board with a bilaterally symmetrical pattern on it. I
> > tried to find the ad on the All Electronics website but I couldn't find
> > it (the ad is on page two), and it's not under cellphone accessories in
> > their online catalog.
>
> You can buy them on eBay by the gross for pocket change. (Take a look
> at eBay's wholesale offerings.)
>
> Of course they are an obvious scam, much as are many of the products
> sold to the audiophile community. A few years ago they were being sold
> on TV, but after an FTC crackdown, they're now usually seen as your
> "free bonus" when you buy another product. Since in this case they're
> being "given away", the FTC can't do much.

I wouldn't be too sure of that. The FTC has cracked down on other scams
even tho they didn't actually sell something. If it's false
advertising, then they can do something about it (whether or not they
choose to do so is another question).

One of these comes to mind. The FTC came down on Philips last year for
taking too long on getting the rebates back to the consumers. And
another one is the apparent change in Plublisher's "Ed McMahon" Clearig
House ads which no longer claim that you've won a million dollars.

> I'm now waiting to see the FTC crackdown on the claims of sellers of
> "Ionized Bracelets" and "Magnetic Pillows."

I think they already have, or have warned them. If you go to Quackwatch
(.org?) and read the information about the Q-ray bracelet, you will see
that the Q-ray ads from a few years ago were making claims that they no
longer have in their current web pages (you have to go to their website
for those). They now say, "we believe.." as if it is not a claim, etc.
But they still have their infomercials on TV so they are apparently

still making big bucks off the devices even tho quackwatch tells you
they're a hoax.

> The general public is too diverse to become technically educated on
> the nature of these scams, but the government can go after the people
> selling them nothing but hot air and ridiculous promises.

Well, the public could just be buying something for the trendiness of
it, knowing full well that it's ineffective. Remember the Pet Rock?
Like, who woulda thunk that the consumers would fall for such a thang?

Another one that is no longer seen in the magazines (come to think of
it, we no longer see the magazines either), is the "Turns your whole
house into a TV antenna!", which is just a pair of 470 pF capacitors
inside a plastic box, with one lead of the caps connected to the 120V
plug pins and the other leads connected to the TV antenna twinlead
screws. Such a deal, at only $19.95!

I had a friend who fell for such things. He once asked me to
participate in the pyramid scheme that some co-worker suckered him into,
for $200.00! I told him that it was an illegal scam, and he went back
and got his money back from the scammer. That was back in the '70s,
when $200 was more like a thousand today.

> Harry C.
>

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

661. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 15:09:35 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189eeb88211e7852989f49@news.inreach.net>
Source record: 38263
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <3q763vk9l47n0s0evcq1qckkr2lch8br7g@4ax.com>,
wdg@[206.180.145.133] mentioned...

> One of the biggest and most lucrative scams I've seen is the #6 welding
> cable for speaker leads and 1/0 welding cable for primary 12v power leads
> for these ghetto blasters the idiot kids are putting in their cars. Oh
> yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
> the public's utter stupidity.
>
> Not only is the wire size absurd, the per-foot prices the sound shops are
> charging for it borders on usury.
>
> Of course, a fool and his money are soon parted.

I was walking by the local sound shop and the salesman and yuppie
customer were standing next to the customer's shiny new Porsche and he
was telling him that he would have to cut a hole into the door for the
speakers, and the customer got rather agititated and started to turn
pale when he heard the word CUT...

[snip]

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
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662. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 15:15:16 UTC
From: Watson 'Atto Parsec' Name <alondra101@hotmail.com>
Message-ID: <MPG.189eece3fa41defc989f4a@news.inreach.net>
Source record: 38264
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <D3GY9.178807$j8.4459654@twister.tampabay.rr.com>,
aichip@cfl.rr.com mentioned...
> In the distant future, copper will be mined from veins of old automobiles.
> Theories will abound on what forces of nature concentrated the copper as purely
> as it will be found, and in such precise geometric patterns of fiber and twist.

Aw, c'mon, Chip. You know that they scrap all that stuff out before
they crush them cars, and besides, the crushed car is in the shape of a
cube, not a vein. And another most important fact is that all those
'60s gas guzzlers were loaded onto ships and taken to Japan, where they
have no natural iron resources, and then were turned back into Toyota
Corollas and Datsuns, and shipped back to the U.S. Like, why waste
something that's already dug out of the ground? :-P

> Cheers!

> Chip Shults

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

663. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 15:24:29 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E354E95.3000207@socal.rr.com>
Source record: 38265
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

8088

Technician wrote:

>In article <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>, scott@scotti.sh!t
>says...
>
>
>>Technician wrote:
>>
>>
>>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
>>>says...
>>>
>>>
>>>>
>>>>
>>>>
>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>If you want to run dos programs, why not use dos?
>>>>>
>>>>>
>>>>Because if the machine came up and on the screen was:
>>>>
>>>>C:\>
>>>>
>>>>They wouldn't know what to do. If it ain't called SETUP
>>>>or INSTALL, theys be lost!!!!
>>>>
>>>>
>>>>
>>>No offence, but if you are going to run DOS programs, my opinion is that
>>>you should at least know how to work at a prompt, regardless of the
>>>programs need for it.
>>>
>>>

>>I was building XT's back in the day.
>>
>>
>>
>
>i used to have a big old XT. What was the CPU in those anyway? i think
>they were before the X86 family, but maybe not.
>
>~Travis
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

664. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 15:25:02 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E354EB5.8030108@socal.rr.com>
Source record: 38266
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

8088

Technician wrote:

>In article <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>, scott@scotti.sh!t
>says...
>
>
>>Technician wrote:
>>
>>
>>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
>>>says...
>>>
>>>
>>>>
>>>>
>>>>
>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>If you want to run dos programs, why not use dos?
>>>>>
>>>>>
>>>>Because if the machine came up and on the screen was:
>>>>
>>>>C:\>
>>>>
>>>>They wouldn't know what to do. If it ain't called SETUP
>>>>or INSTALL, theys be lost!!!!
>>>>
>>>>
>>>>
>>>No offence, but if you are going to run DOS programs, my opinion is that
>>>you should at least know how to work at a prompt, regardless of the
>>>programs need for it.
>>>
>>>

>>I was building XT's back in the day.
>>
>>
>>
>
>i used to have a big old XT. What was the CPU in those anyway? i think
>they were before the X86 family, but maybe not.
>
>~Travis
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

665. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 16:04:32 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <QqqcncInpJsdxaijXTWcqw@comcast.com>
Source record: 38268
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Check out ebay, but you want win98SE, not 95.

Tam/WB2TT
"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run
some
> DOS programs.
> THANKS
>
>

666. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 16:56:10 UTC
From: mikea@mikea.ath.cx
Message-ID: <b13obabfi2@puck.litech.org>
Source record: 38269

Bill Higdon <w.higdon@attbi.com> wrote:

> John Popelish wrote:
> > swells244@insightbb.com wrote:
> >
> >>ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
> >>shooting and kit building.
> >
> >
> > My favorite is the Tektronix 465 (100 MHz dual channel with delayed
> > sweep) or the 464M (military version). It was once just about the
> > best analog design with the most intuitive controls. They now sell on
> > EBAY for about $100.
> >
> > e.g.
> > http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
> > http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677

> I'd also look at the HP 180 and 17xx series, they both are good scoes
> and can be bougth on ebay for resonable prices.
> Bill Higdon

I love my Tek 465B, but I also like my Philips PM3055.

Both of them Just Plain Work. I think I paid $100 for the Philips
scope. I paid more than $100 for the Tek about 5 years back, but
it was till in-cal at the time, and so worth a bit more than
saverage.

--
The Bible is not my Book and Christianity is not my religion. I could
never give assent to the long complicated statements of Christian dogma.
--Abraham Lincoln, tyrant

667. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 17:14:10 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <RdecnTJpi_4P9qijXTWcqw@cnmnetwork.com>
Source record: 38270

I have a Tektronix 316 that is a neat little job. It's small and reliable.

Make me an offer.

Bob

668. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 18:19:33 UTC
From: richard dalton <rdalton1@sbcglobal.net>
Message-ID: <VKeZ9.881$u65.416497850@newssvr11.news.prodigy.com>
Source record: 38271
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I found win 98 &win ME on Kazaa,they work great
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:QqqcncInpJsdxaijXTWcqw@comcast.com...
> Check out ebay, but you want win98SE, not 95.
>
> Tam/WB2TT
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
> some
> > DOS programs.
> > THANKS
> >
> >
>
>

669. Re: If you are looking for Optical Shaft Encoders

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 20:13:27 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <HpgZ9.17640$zF6.1298553@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38272

Grayhill has some 32 pulse/revolution units at the 30 dollar price. You can
buy these from Digi-Key.

Pete

Bill Kirkland <kirklandb@sympatico.ca> wrote in message
news:3E33F774.D382F223@sympatico.ca...
> If you are looking for Optical Shaft Encoders I would suggest checking
> out
> Ebay by searching under "Optical Encoders". I recently bought 10 high
> quality enoders for far less than I could have through regular channels.
>
> You might also check out
>
> http://www.usdigital.com/products/optical-encoders.shtml
>
>
> Regards
> Bill
> VE3JHU
>

670. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 21:11:33 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E35A1AE.8030705@attbi.com>
Source record: 38273

Mike Andrews wrote:
> Bill Higdon <w.higdon@attbi.com> wrote:
>
>
>>John Popelish wrote:
>>
>>>swells244@insightbb.com wrote:
>>>
>>>
>>>>ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
>>>>shooting and kit building.
>>>
>>>
>>>My favorite is the Tektronix 465 (100 MHz dual channel with delayed
>>>sweep) or the 464M (military version). It was once just about the
>>>best analog design with the most intuitive controls. They now sell on
>>>EBAY for about $100.
>>>
>>>e.g.
>>>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3109920350&category=4677
>>>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3308309959&category=4677
>>
>
>>I'd also look at the HP 180 and 17xx series, they both are good scoes
>>and can be bougth on ebay for resonable prices.
>>Bill Higdon
>
>
> I love my Tek 465B, but I also like my Philips PM3055.
>
> Both of them Just Plain Work. I think I paid $100 for the Philips
> scope. I paid more than $100 for the Tek about 5 years back, but
> it was till in-cal at the time, and so worth a bit more than
> saverage.
>

I have to admit, I packed a Tek 465 for many years in the field. It
always worked except for the time a Airline tug ran over it. I had put
it in it's transit case and checked it rather than carrying it on. The
Airline bought a new scope for that one.
Bill Higdon

671. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 21:16:40 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0301271316.4a1d655c@posting.google.com>
Source record: 38274
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"BKT" <bthomas1@wi.rr.com> wrote in message
news:<WC4Z9.59767$Gm2.1441665@twister.rdc-kc.rr.com>...
> ebay 29.99
>

http://www.warez.com/ free if you dont pick up a virus or trojan
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
> some
> > DOS programs.
> > THANKS
> >
> >

672. FS: TUBES, receiving & special purpose @ low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 22:02:10 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <C%hZ9.21528$LA4.2234943@news1.west.cox.net>
Source record: 38275
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please email w6krc@arrl.net for a detailed list.

673. Re: Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 22:49:22 UTC
From: James <jamesf@xxxnec.com.au>
Message-ID: <1043707761.794821@busy.neca.nec.com.au>
Source record: 38276

Hi Glynn,

You can email me directly at:

James_Fenech @ telstra.com.au.

Sorry the shematic isn't too readable, it was only put on the net on request of someone on the newsgroup. Someone in the UK was intouch with me a while ago and was trying to clean up the circuit, but I haven't heard from them for a while.

Basically, the timing components aren't critical. Using the smallest resistor allowed by your flavour 4046 (I used the 74HC4046), and a large pot will allow for the greatest range available.

I'll try to dig up some component values.

James.

"Glynn Furr" <GFURR1@nc.rr.com> wrote in message news:p9DY9.104099$eB1.4026292@twister.southeast.rr.com...
> I need to get in touch with James Fenech or anyone who has built his
> "Wobbulator" as described at
> http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The
> problem I have is that I am unable to read or make out the resistor or
> capacitor values he has drawn around the 4046. Possibly if someone has a
> clearer jpg of the schematic or a parts list they could help me out.
>
> Thanks in advance for all help,
>
> Glynn also k4rki@arrl.net
>
>

674. Re: Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-27 22:51:06 UTC
From: James <jamesf@xxxnec.com.au>
Message-ID: <1043707866.367818@busy.neca.nec.com.au>
Source record: 38277

Actually its drawn on plain paper in pencil, but has been modified many
times. The scanner used didn't really do a good job.
"Brian Griffey" <briangriffey@worldnet.att.net> wrote in message
news:wfFY9.3277$rq4.315603@bgtnsc05-news.ops.worldnet.att.net...
> Yes, that schematic looks like it was scribbled on the back of a cocktail
> napkin... lol
>
> --
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
> Brian Griffey
> See the SkyWave Linear Amplifier at
> http://home.att.net/~briangriffey/Index.html
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>
>
> "Glynn Furr" <GFURR1@nc.rr.com> wrote in message
> news:p9DY9.104099$eB1.4026292@twister.southeast.rr.com...
> > I need to get in touch with James Fenech or anyone who has built his
> > "Wobbulator" as described at
> > http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The
> > problem I have is that I am unable to read or make out the resistor or
> > capacitor values he has drawn around the 4046. Possibly if someone has a
> > clearer jpg of the schematic or a parts list they could help me out.
> >
> > Thanks in advance for all help,
> >
> > Glynn also k4rki@arrl.net
> >
> >
>
>

675. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 00:09:20 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <9h2cndsxH8exV6ijXTWcpw@comcast.com>
Source record: 38278
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Tarmo Tammaru wrote:
>
> Check out ebay, but you want win98SE, not 95.

You're going to load 98 or ME on a P60 with 8MB of RAM and a
420MB hard drive?

I'm going to load up just such a machine with MY CD copy of
WIN 95 B. I have a buttload of 8MB DIMMS for it.

The 'puter was free. I can always find a home for it.
I just might hook it up to my network and hook a printer
to it in another room...

Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
Soundblaster with MKE CD ROM is extra. ;->

676. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 00:23:15 UTC
From: Randy <rchapman8@houston.rr.com>
Message-ID: <T3kZ9.13082$1z1.1509778@twister.austin.rr.com>
Source record: 38279
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Scott" <scott@scotti.sh!t> wrote in message
news:9h2cndsxH8exV6ijXTWcpw@comcast.com...
>
>
> Tarmo Tammaru wrote:
> >
> > Check out ebay, but you want win98SE, not 95.
>
>
>
> You're going to load 98 or ME on a P60 with 8MB of RAM and a
> 420MB hard drive?
>
> I'm going to load up just such a machine with MY CD copy of
> WIN 95 B. I have a buttload of 8MB DIMMS for it.
>
> The 'puter was free. I can always find a home for it.
> I just might hook it up to my network and hook a printer
> to it in another room...
>
> Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
> pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
> Soundblaster with MKE CD ROM is extra. ;->

Costs more to ship than it's worth. Keep using it for what job suits it best....doorstop.

677. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 00:59:21 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <-MWdnRcny9Z-SKijXTWcoA@comcast.com>
Source record: 38280
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Randy wrote:

> > Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
> > pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
> > Soundblaster with MKE CD ROM is extra. ;->
>
> Costs more to ship than it's worth. Keep using it for what job suits it
> best....doorstop.

I can always find a cheap ham who needs to run DOS programs!!!

678. rci 2970

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 02:30:44 UTC
From: "BC-)03" <BC->
Message-ID: <oXIZ9.7125$d66.636468@newsread1.prod.itd.earthlink.net>
Source record: 38281

anyone interested in a 2970 i have one 4 sale here

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4674&item=3004020410&
rd=1

679. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 02:46:36 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <6EydnR-G0NZlYKijXTWcpQ@ctc.net>
Source record: 38286
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

>
> Robert Bonomi wrote:
> >
> > C:\>
> > C:\DOS>
> > C:\DOS\RUN>
> > RUN \DOS\RUN
> >
> > with apologies to Dick and Jane
>
>
> Run where? DOS is single-tasking. It can't think ahead.
> Remember the big upgrade with WIN95? Being able to
> download a file and send it straight to the floppy drive!

Its a joke on the first book many of us older people learned to read from.

Dick and Jane were a boy and girl in the reading book. It starts off
something like:
See Dick, See Dick run.

680. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 02:49:29 UTC
From: <>
Message-ID: <ZcmZ9.30776$A%3.392970@ord-read.news.verio.net>
Source record: 38282
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>
>> > I am looking for a CD of Windows 95 for my shack computer so I can run some
>> > DOS programs.
>> > THANKS
>> >
>> >
>> >
>>
>> If you want to run dos programs, why not use dos?
>
>
>Because if the machine came up and on the screen was:
>
>C:\>

C:\>
C:\DOS>
C:\DOS\RUN>
RUN \DOS\RUN

with apologies to Dick and Jane

681. Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 02:49:45 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <b14r49$6qi$0@216.39.177.51>
Source record: 38283

I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number of small signal Motorola part numbered devices that are fried. Such as M9652, M9642, M9643. I've looked through some old ECG, NTE, etc. cross references but no joy. Does anyone know of a substitution listing for these devices?

73 de Jack

682. Wanted: NCX-5 Transceiver Service Assistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 03:22:38 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <uNmZ9.65821$lj.2541305@read1.cgocable.net>
Source record: 38285
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a National NCX-5 MK II XCVR c/w AC Power Supply & Crystal Calibrator c/w Manuals that I would like to sell...BUT have a nagging problem, I hope someone has had and/or solved in the past.
Would like to sell it in working condx...as that would be the right thing to do!

The Radio works A-OK generally, but when you tune in a station calling CQ etc, and you key the rig to talk to him/her, on SSB or CW, I find that the Transceiver transmits 0.5 Khz OFF Freq from the Received signal.
Of course the other station tunes off his freq onto yours...you tune to hear him better..and "ring around the rosy" we go.
I've retuned the radio a couple of times, and am now seriously looking at components in the VFO or the Receive RIT Circuit.

If you have any this situation, any comments to either confirm my thoughts or point me in a better direction would be welcomed.
Thank You for your time
Norm VE3CZI

683. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 03:41:35 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>
Source record: 38284
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
>
> C:\>
> C:\DOS>
> C:\DOS\RUN>
> RUN \DOS\RUN
>
> with apologies to Dick and Jane

Run where? DOS is single-tasking. It can't think ahead.
Remember the big upgrade with WIN95? Being able to
download a file and send it straight to the floppy drive!

684. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 03:58:53 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E35FFFD.ED5420C6@mfi.net>
Source record: 38287
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Watson 'Atto Parsec' Name wrote:
>
> In article <3E31ED10.2C9305D6@mfi.net>, terrell@mfi.net mentioned...
> [snip]
>
> > I love that they never want a cell tower within 20 miles of their
> > home or business, but complain of bad signal strength. The safest place
> > from RF is right under the tower. I was a broadcast engineer at a 5 MW
> > ERP TV station on Ch 55, (1749 foot tower) and we had trouble getting a
> > decent picture right under the tower, so we had to use a small antenna
> > to pick up a reflection from another tower a few miles away.
>
> I'm surprised that there was so little RF so close to the Tx. I would
> expect that even at a neg 70 or 90 dB or more, at that high a power the
> leakage would be strong enough to give some picture on a TV. Of course
> you did say that it was not coax but waveguide up to the antenna..
>
> --

1/2" thick brass with lots of stainless steel bolts in every flange.
There was some RF under the tower, but there were so many reflections
you couldn't get a clear picture, just a very snowy picture with dozens
of ghosts. The tower was right next to the transmitter building, and
did a fair job of shielding the control room. We had five FM stations
on the tower at 1000 feet, and you couldn't pick them up clearly till
you were a couple hundred feet from the base of the tower. My first
night working at the transmitter site I drove up the long private road,
and my radio started playing. It had an open output transistor, but
the B-C junction was rectifying the RF, and it was quite loud, and
distorted.
--

Michael A. Terrell
Central Florida

685. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 04:37:14 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3c27p1d6uf37a@corp.supernews.com>
Source record: 38288
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Yep! back in the days when Heather had a mommy and a daddy...

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:6EydnR-G0NZlYKijXTWcpQ@ctc.net...
> >
> > Robert Bonomi wrote:
> > >
> > > C:\>
> > > C:\DOS>
> > > C:\DOS\RUN>
> > > RUN \DOS\RUN
> > >
> > > with apologies to Dick and Jane
> >
> >
> > Run where? DOS is single-tasking. It can't think ahead.
> > Remember the big upgrade with WIN95? Being able to
> > download a file and send it straight to the floppy drive!
>
> Its a joke on the first book many of us older people learned to read from.
>
> Dick and Jane were a boy and girl in the reading book. It starts off
> something like:
> See Dick, See Dick run.
>
>

686. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 05:25:26 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E361446.8EAB26BB@mfi.net>
Source record: 38289
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
>
> Technician wrote:
> >
> >
> > No offence, but if you are going to run DOS programs, my opinion is that
> > you should at least know how to work at a prompt, regardless of the
> > programs need for it.
>
> I was building XT's back in the day.

Real geeks format hard drives with debug :)
--

Michael A. Terrell
Central Florida

687. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 05:51:17 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.189fba345c1a1363989716@192.168.42.131>
Source record: 38290

In article <b14r49$6qi$0@216.39.177.51>, n7oo@theriver.com says...

> I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number of
> small signal Motorola part numbered devices that are fried. Such as M9652,
> M9642, M9643. I've looked through some old ECG, NTE, etc. cross references
> but no joy. Does anyone know of a substitution listing for these devices?

Don't know about a sub list, but I can tell you that the full
number for that class of devices (with a '9' right after the 'M') would
break out as 48-86xxxx, where xxxx is the four digits from your notes
above.

Example: M9642 is actually a 48-869642, M9643 is 48-869643, etc.

FWIW: I happen to know at least two of those devices very well. The
9642 and 9643 are general-purpose NPN and PNP devices, respectively. You
could probably substitute 2N2222 and 2N2907, respectively, and get away
with it.

Hope that helps.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

688. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 06:02:30 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <6zydneXo875tgaujXTWc2Q@comcast.com>
Source record: 38291
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Michael A. Terrell" wrote:
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> Scott wrote:
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> > > you should at least know how to work at a prompt, regardless of the
> > > programs need for it.
> > >
> > I was building XT's back in the day.
>
> Real geeks format hard drives with debug :)

I got your geek...right here!!

-g=c800:5 (for WD)

689. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 07:32:25 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E363209.4220E75B@mfi.net>
Source record: 38292
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
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> "Michael A. Terrell" wrote:
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> > > I was building XT's back in the day.
> >
> > Real geeks format hard drives with debug :)
>
> I got your geek...right here!!
>
> -g=c800:5 (for WD)

I like to ask the "Computer experts", What was the code for setting
up a hard drive with debug, and seeing the blank stares. So much for an
IT department. :) I rebuild and sold a lot of XT and PCs, and went
through hundreds of used hard drives to test them using Debug. It was a
good idea to do a half dozen or more machines at once, because it took
so long to do a machine, and if one failed you stuck in another drive,
and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
hard drives that predate the ST-506 interface. Geeky enough?
--

Michael A. Terrell
Central Florida

690. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 08:05:00 UTC
From: la8ak.xnd@online.no
Message-ID: <3e35bfaf.16370196@news.online.no>
Source record: 38293

somebody asked what I meant by "cross-wind a coil"...

It is in fact difficult to find the right words in different languages
and the dictionary may not always help
In USA the term is "Universal Winding" -
while in UK they say "Wave winding"

73
Jan-Martin
LA8AK
http://www.laud.no/la6nca/LA8AK/
--
remove ,xnd to reply

691. New Ham Only Classified Ads Site

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 09:17:06 UTC
From: Lee Asher <keith@detectiveagents.com>
Message-ID: <4mic3vg781qcsf39dhor2opg8iida84c89@4ax.com>
Source record: 38294

Hi fellow Amateurs,

Just created, for Hams only, a brand new Classified Ads Site. Totally
FREE.

Send your ad to over 1500 other sites with one click.
Many categories. Take a look, tell your local hams and radio clubs.

http://cybertechworld.com/ham.htm

73, Lee, VK4CXX
Brisbane, Australia.

Yours Sincerely,
Lee Asher
Brisbane, Australia
==========
Budget AutoResponder
http://budgetautoresponder.com
==========
FREE Software GIVEAWAYS
available from ALL these websites.

http://optinsafemail.net
http://detectiveagents.com
http://moretraffic-4u.com
http://cybertechworld.com

==========

692. PLL 04A pin outs and switching data.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 10:24:56 UTC
From: xrenfredm@xtra.co.nz
Message-ID: <3e3659e9.3064066@news.xtra.co.nz>
Source record: 38295

Hi out there. Anybody got pin data and frq/truth table for this chip used in an older VHF that onlt has US VHF frequencies. I want to add a switch so it can receive the International frequencies 63 and 64. Any ideas? Cheers, Renfred.
Remove (X) from xrenfred for correct email address...thanks.

693. Tank circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 11:02:00 UTC
From: Wouter Visser <wfvisser@dds.nl>
Message-ID: <3E366329.9DFC7B9D@dds.nl>
Source record: 38296

Hi,

I was hoping someone could help me understand the following.
In a colpits oscillator, where the LC tank circuit is composed of an inductor (L1) and a split parallel capacitance (C1 and C2), what determines the optimal ratio between C1 and C2? I see how to calculate combined series capacitance of C1 and C2, given a desired frequency and inductor value. However, this still allows many combinations of C1 and C2 to obtain the required capacitance and I fail to understand why very often unequal capacitor values are chosen. In many circuits I examined, one capacitor would be many times greater than the other. Why?

Any help is appreciated,

Wouter.

694. Re: Tank circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 11:28:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3cqbb95dr8t1b@corp.supernews.com>
Source record: 38197

The capacitors form a voltage divider which determines how much of the tank circuit voltage is fed back into the active device, and the amount fed back depends on the capacitance ratio. (The Hartley oscillator works exactly the same way, except that the voltage is stepped down by a tap on the tank inductor.) There are tradeoffs involved in how much is fed back. A certain minimum is required in order for the oscillator to oscillate at all. Once that amount is determined, increasing the amount of feedback will make the oscillator start faster, but will degrade the output signal purity and the oscillator stability. But enough feedback has to be used to insure that the oscillator will start under all conditions of temperature, voltage, etc. The actual amount required depends on the design of the rest of the circuit.

Roy Lewallen, W7EL

Wouter Visser wrote:
> Hi,
>
> I was hoping someone could help me understand the following.
> In a colpits oscillator, where the LC tank circuit is composed of an
> inductor (L1) and a split parallel capacitance (C1 and C2), what
> determines the optimal ratio between C1 and C2? I see how to calculate
> combined series capacitance of C1 and C2, given a desired frequency and
> inductor value. However, this still allows many combinations of C1 and
> C2 to obtain the required capacitance and I fail to understand why very
> often unequal capacitor values are chosen. In many circuits I examined,
> one capacitor would be many times greater than the other. Why?
>
> Any help is appreciated,
>
> Wouter.
>

695. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 11:31:55 UTC
From: shoppa@trailing-edge.com
Message-ID: <bec993c8.0301280331.1abc2363@posting.google.com>
Source record: 38198

Bruce Lane <SpammersAreVermin@dev.nul> wrote in message
news:<MPG.189e2b11557ce735989713@192.168.42.131>...
> Almost forgot to mention some to avoid. Stay away from the
> following:
>
> Dumont

Dumont has made scopes recently? The newest Dumont scope I remember being
advertised must be 30 years old... and nobody was buying them then.
The company had really been out of gas and chugging along on fumes since
at least the 60's, and even before that they were very much the "budget"
scope.

I still have a DuMont 208, which was a pretty affordable scope for 1955 :-)
It probably cost less new than it cost just to ship a Tektronix from the
factory back then :-)

Tim.

696. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 13:17:04 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <ar6dnSxIoZVXH6ujXTWcoA@comcast.com>
Source record: 38199
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

```
"Michael A. Terrell" wrote:
>
> Scott wrote:
> >
> > "Michael A. Terrell" wrote:
> > >
> > > Scott wrote:
> > > >
> > > > Technician wrote:
> > > > >
> > > > >
> > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > you should at least know how to work at a prompt, regardless of the
> > > > > programs need for it.
> > > >
> > > > I was building XT's back in the day.
> > >
> > > Real geeks format hard drives with debug :)
> >
> > I got your geek...right here!!
> >
> > -g=c800:5 (for WD)
>
> I like to ask the "Computer experts", What was the code for setting
> up a hard drive with debug, and seeing the blank stares. So much for an
> IT department. :) I rebuild and sold a lot of XT and PCs, and went
> through hundreds of used hard drives to test them using Debug. It was a
> good idea to do a half dozen or more machines at once, because it took
> so long to do a machine, and if one failed you stuck in another drive,
> and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> hard drives that predate the ST-506 interface. Geeky enough?

Yes you are!!! I like to ask the "Computer experts" how many 16 bit
slots are in an XT. Actually, debug ran a routine in ROM that did
the low-level format. Fdisk and Format are the only two steps most
ever see these days.
```

697. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 15:44:19 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E36A552.6090108@attbi.com>
Source record: 38200

Tim Shoppa wrote:
> Bruce Lane <SpammersAreVermin@dev.nul> wrote in message
news:<MPG.189e2b11557ce735989713@192.168.42.131>...
>
>> Almost forgot to mention some to avoid. Stay away from the
>>following:
>>
>> Dumont
>
>
> Dumont has made scopes recently? The newest Dumont scope I remember being
> advertised must be 30 years old... and nobody was buying them then.
> The company had really been out of gas and chugging along on fumes since
> at least the 60's, and even before that they were very much the "budget"
> scope.
>
> I still have a DuMont 208, which was a pretty affordable scope for 1955 :-)
> It probably cost less new than it cost just to ship a Tektronix from the
> factory back then :-)
>
> Tim.

I think DuMont's last gasp was part of a 3way government contract for
Miliatry portable scopes, HP's was a 180, TEK & Dumont I'm not sure of
the model numbers. I know a couple of shops that got stuck with the
DuMonts had accidents happen to the scopes to send them back and get a
TEK or HP scope.
Bill Higdon

698. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 17:07:29 UTC
From: n5kzw@arrl.net
Message-ID: <3e36b7f0.6140309@news.ev1.net>
Source record: 38201
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

The best advice I got (after the fact, unfortunately) was to get a
9-pin subminiature-D female connector kit from RadioShack. You want
the ones with loose pins. Make your solder connection to the solder
cups on the female contacts and then slip them oveer the pins on the
back of the DIN connector. You could also slip a piece of heat shrink
over the contact before pushing on to the DIN pins.

Regards,
Ed - N5KZW

On Fri, 24 Jan 2003 10:19:53 -0500, Scott <scott2rp789@netscape.net>
wrote:

>Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
>3 and 4 to get some line level audio from the rig. I could not believe
>my eyes when I got the 13 pin DIN - is there some trick to soldering to
>those pins? Or am I missing something here? Thanks - Scott.
>

699. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 17:44:44 UTC
From: Skipp <spammenotplease@yahoo.com>
Message-ID: <b16ficecd3@woodrow.ucdavis.edu>
Source record: 38202

Hi Bruce,

Looks like great information... I have some other things to add... You can actually call Motorola Parts and order them... using your credit card. Sometimes its cheaper and more practical, most of the time it is not.

You can order generic audio transistors from www.jameco.com simple enough, but people should stay away from ordering the basic transistors which act as saturated switches and often swapped in and out of the same circuits. You just limit your circuit when using SSw devices... their basic specs and labels are indicated on the Jameco Catalog pages.

So people, make sure to order audio transistors and not small logic type transistors so you wont beat yourself in the head when a circuit doest play as expected.

cheers
skipp
http://sonic.ucdavis.edu

: Don't know about a sub list, but I can tell you that the full
: number for that class of devices (with a '9' right after the 'M') would
: break out as 48-86xxxx, where xxxx is the four digits from your notes
: above.

: Example: M9642 is actually a 48-869642, M9643 is 48-869643, etc.

: FWIW: I happen to know at least two of those devices very well. The
: 9642 and 9643 are general-purpose NPN and PNP devices, respectively. You
: could probably substitute 2N2222 and 2N2907, respectively, and get away
: with it.

: Hope that helps.

: --
: Bruce Lane, Owner and Head Hardware Heavy,
: Blue Feather Technologies -- http://www.bluefeathertech.com
: Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
: kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
: "I'll get a life when someone demonstrates to me it would be superior to
: what I have now..." (Taki Kogoma)

700. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 17:51:01 UTC
From: Dave Hall <nojunk_n3cvj@worldlynx.net>
Message-ID: <3E36C305.ECC@worldlynx.net>
Source record: 38204
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
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> "Michael A. Terrell" wrote:
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> > > > > > I was building XT's back in the day.
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> > > >
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> > >
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> > > hard drives that predate the ST-506 interface. Geeky enough?
>
> Yes you are!!! I like to ask the "Computer experts" how many 16 bit
> slots are in an XT. Actually, debug ran a routine in ROM that did
> the low-level format. Fdisk and Format are the only two steps most
> ever see these days.

You mean like g=C800:5 ?

Dave
"Sandbagger"

701. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 17:57:14 UTC
From: Skipp <msrnutsweareall@yahoo.com>
Message-ID: <b16g9qecd4@woodrow.ucdavis.edu>
Source record: 38203
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

: In rec.radio.amateur.homebrew Uncle Peter
: <radioconnectionNO@cox.netspam> wrote:
: Best of both worlds: MSR2000 PA deck running on a Micor repeater
: base.

There are at least 3 or 4 different MSR PA decks... the highest power continous duty units are pretty much the same as the Micor PA units. The high power (non continous duty) 110 watt units need to be run light duty cycle or turned down to about 60 watts to keep from burning them up in busy applications. Many people use fans on them... not a good idea to trust them at full tilt using a fan... but turning them down to 60 watts and a fan is a great idea.

There are some 30 watt Canadian PA units which can output about 50 watts when run full tilt. I run them about 35 watts with no problems.

A lot of people mistakenly compare the Micor fast/slow squelch system (AS Board) with the MSR squelch system. You can set the MSR squelch system up to work just as good, or the same as the micor response. The MSR squelch is always sharp and responds well into the noise floor, depending on how your set it up. In reality, the MSR Squelch is much more flexible. I detail the setup in my External Controller to MSR text found on the http://sonic.ucdavis.edu Amateur Radio pages. Most people prefer to believe what they first read and what is the most simple to set up right out of the box. In fact, the MSR Repeater Squelch Circuit is more flexible in adjustment than the Micor circuit.

Cheers
skipp
http://sonic.ucdavis.edu

: I love the Micor RX and squelch system over the Mitrek. With a little
: work the 110 watt PA and control system can be retrofitted to an
: existing Micor base. Solves the obsolete PNP RF transistor replacement
: problems as well.

: Cheers

: Pete

: "Skipp can be found through sonic" <notrealemail@yahoo.com> wrote in message
: news:b0s6d3isj3@woodrow.ucdavis.edu...
:> I too used International for many years, but they've become so expensive
:> that I sought out an alternative. I'm also a skeptic and had to verify
:> what I found would be a real fix.
:> A friend uses Bomar and gave me their number, I called and paid $10 per

:> crystal if I re-rocked the element myself. So I've done just that since
:> receiving my first order in.
:>
:> I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
:> and VHF using the Bomar units... very cost effective and so far, not one
:> bad rock. I use the recrystaled elements in my commercial (trunking and
:> conventional) dual mode and amateur repeaters.
:>
:> I've had great service with International and only one receive element
:> (which they did) go just out of spec. But their prices have gotten way out
:> of line.
:>
:> So consider Bomar as a real option, I've placed very large orders with
:> them in the last two years and everything received has been spec, on
:> time and cost effective.
:>
:> I can also field MSR-2000 questions if you have any... I have over 50 in
:> service in many modes (including trunking) and have about worked out every
:> issue you could think up.
:>
:> I have a conversion to an external controller (ham) work up on the
:> http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
:> of the web pages if you have questions. I've also done tone panel
:> connections and repairs of which I'll provide help as practical.
:>
:> cheers
:> skipp
:> http://sonic.ucdavis.edu
:>
:> : In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
:> : Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
:> : purchased crystals in many years where is the best place to buy them ??
: We
:> : will be using the repeater on 146.01/61.Also is there a site with the
: specs
:> : for the channel elements ?
:> : Rcvr Channel Element : KXN 1086A
:> : Xmtr Channel Element : KXN 1088A
:> : THANKS.
:>
:>

702. 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 19:15:45 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <uqjd3vglbof2glvhk2tbshvtr39u759snn@4ax.com>
Source record: 38212
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi,

I need a meter that will show FSD with a current of 200uA. I *have* a
meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

703. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 19:15:46 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <s3kd3v0uua0sqs90rdj58o8kksd1lacngg@4ax.com>
Source record: 38213

On Sun, 26 Jan 2003 17:25:17 -0800, Bruce Lane
<SpammersAreVermin@dev.nul> opined thusly:

>In article <MqVY9.44958$4y2.2161@sccrnsc04>, swells244@insightbb.com
>says...
>
>> ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
>> shooting and kit building.
>> Steve
>
> I will freely admit to being a Tektronix bigot. ;-)

I'm not. I'm currently using a 2225 which somebody gave me for nothing
(and still not worth it) until I can find something suitable to buy,
but it seems to lose the plot completely on the higher timebase
settings. It's also not very user-friendly.
Before that I used a Hameg (German made) 20Mhz scope, which was a
piece of cake to use and gave marvelously stable, low-noise waveforms.
Both the scopes were made in the late 80s and no doubt the Tek cost
more, but I still got on much better with the old Hameg.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

704. Re: Tank circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 19:56:06 UTC
From: novatech@eskimo.com
Message-ID: <b16n8m$o9j$1@eskinews.eskimo.com>
Source record: 38205

Roy Lewallen <w7el@eznec.com> writes:

>exactly the same way, except that the voltage is stepped down by a tap
>on the tank inductor.) There are tradeoffs involved in how much is fed
>back. A certain minimum is required in order for the oscillator to
>oscillate at all. Once that amount is determined, increasing the amount
>of feedback will make the oscillator start faster, but will degrade the

It turns out that for almost all circuits the "correct" gain is about
3. This is the loop gain including loading due to Q, strays, etc. This
can be derived from "large signal transconductance" curves of devices
operating in Class C (almost all oscillators). An old, but solid reference
for this kind of design is "Communications Systems" by Clarke and Hess.

Steve
--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

705. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 21:00:58 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <9prd3vk6bdfv7jirr6uk8r7fuqercb11rb@4ax.com>
Source record: 38206

On Sun, 26 Jan 2003 17:28:18 -0800, Bruce Lane
<SpammersAreVermin@dev.nul> wrote:

> Come to think of it, just stick with Tektronix (but avoid their
>T922 model, and the 223x series). It makes things much simpler.

Why did you rule out the 223x scopes? What makes them undesirable?

-Rex, kk6mk

706. TA7611 data sheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 21:14:44 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e36f20c.926842@news.freeserve.net>
Source record: 38207

can anyone help with a TA7611 data sheet?
searched using Google and came up with nowt.
cheers, Mike

707. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 22:45:49 UTC
From: donrm@soco.agilent.com
Message-ID: <1043793948.994447@cswreg.cos.agilent.com>
Source record: 38208
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew wdg@[206.180.145.133] wrote:
> One of the biggest and most lucrative scams I've seen is the #6 welding
> cable for speaker leads and 1/0 welding cable for primary 12v power leads
> for these ghetto blasters the idiot kids are putting in their cars. Oh
> yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
> the public's utter stupidity.

The fat speaker cable supposedly affords better speaker damping factor
with solid state amps -- wonder what the damping factor was when we were
using tube amplifiers and output transformers?

Think that's bad? Take a look at http://www.essentialsound.com/ for the
most expensive extension cords in history.

One dude I worked with said he could hear the difference between gold
plated and nickle plated RCA connectors.

If you can't dazzle them with brilliance, baffle them with bullshit.

Don Montgomery
donrm@soco.agilent.com

708. Icom BP- battery packs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 23:00:00 UTC
From: David Harmon <source@netcom.com>
Message-ID: <3e3a0a70.65250090@newstest2.earthlink.net>
Source record: 38209

Older ICOM battery packs, e.g BP-3, BP-5 etc. These have indentations on the bottom that operate three micro switches in the BC-35 drop-in charger and tell the charger something about what kind of battery is put in.

Can anyone please tell me what the code is? What pattern of indentations corresponds to what info about the pack?

Sorry if this does not sound like homebrew, but I'm attempting to put together the best combination of bits that I have to make working packs, including combinations of cells that may not be what ICOM had envisioned.

709. Re: Wanted: NCX-5 Transceiver Service Assistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 23:36:10 UTC
From: Rich Vitello <w1rv@abcde.com>
Message-ID: <b173jrruv1@bob.news.rcn.net>
Source record: 38210
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I had one of these when they were brand new (just a few years ago :) I do seem to recall that there is a pot to bring the rec and transmit into alignment but I don't recall what it is. Perhaps some one else will know the specifics.

"Norm VE3CZI" <ve3czi@arrl.net> wrote in message news:uNmZ9.65821$lj.2541305@read1.cgocable.net...
> I have a National NCX-5 MK II XCVR c/w AC Power Supply & Crystal Calibrator
> c/w Manuals that I would like to sell...BUT have a nagging problem, I hope
> someone has had and/or solved in the past.
> Would like to sell it in working condx...as that would be the right thing to
> do!
>
> The Radio works A-OK generally, but when you tune in a station calling CQ
> etc, and you key the rig to talk to him/her, on SSB or CW, I find that the
> Transceiver transmits 0.5 Khz OFF Freq from the Received signal.
> Of course the other station tunes off his freq onto yours...you tune to hear
> him better..and "ring around the rosy" we go.
> I've retuned the radio a couple of times, and am now seriously looking at
> components in the VFO or the Receive RIT Circuit.
>
> If you have any this situation, any comments to either confirm my thoughts
> or point me in a better direction would be welcomed.
> Thank You for your time
> Norm VE3CZI
>
>
>

710. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-28 23:38:33 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b17495$5td$1@slb9.atl.mindspring.net>
Source record: 38211

When I was working at a Army Depot in the radio shop I was told by a
Motorola rep that Motorola changed part numbers when they changed models.
Which basically means that a 2N2222 could have hundreds of different
Motorola part numbers.

FWIW department. I used to look up in the Sylvania ECG book in the
'reverse' fashion. Meaning Id look up common generic transistors and
compare them to the MPN.

Dan/W4NTI
"Jack Taylor" <n7oo@theriver.com> wrote in message
news:b14r49$6qi$0@216.39.177.51...
> I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number of
> small signal Motorola part numbered devices that are fried. Such as
M9652,
> M9642, M9643. I've looked through some old ECG, NTE, etc. cross
references
> but no joy. Does anyone know of a substitution listing for these devices?
>
> 73 de Jack
>
>

711. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 00:13:16 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <w0FZ9.492582$F2h1.436434@news01.bloor.is.net.cable.rogers.com>
Source record: 38214
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

donrm@soco.agilent.com wrote:

> In rec.radio.amateur.homebrew wdg@[206.180.145.133] wrote:
>> One of the biggest and most lucrative scams I've seen is the #6 welding
>> cable for speaker leads and 1/0 welding cable for primary 12v power leads
>> for these ghetto blasters the idiot kids are putting in their cars. Oh
>> yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
>> the public's utter stupidity.
>
> The fat speaker cable supposedly affords better speaker damping factor
> with solid state amps -- wonder what the damping factor was when we were
> using tube amplifiers and output transformers?
>
> Think that's bad? Take a look at http://www.essentialsound.com/ for the
> most expensive extension cords in history.
>
> One dude I worked with said he could hear the difference between gold
> plated and nickle plated RCA connectors.
>
> If you can't dazzle them with brilliance, baffle them with bullshit.

It's amazing the BS that's outhere. If a different power cable makes a
difference, you've got a garbage power supply.

Anyone stupid enough to buy those, obviously doesn't know anything about
modern stereos, other than how to light their wallet.

There used to be an audio column in the old Radio Electronics magazine,
where the authour often pointed out the lunacy of those "golden ears" types
and the garbage they believed. One hallmark of them, is they don't accept
A-B tests as valid. But they maintain they can hear something in one
location and accurately compare it with another device in a different
location and time. Those guys are clueless!!!!

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

712. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 00:38:45 UTC
From: Walter Harley <walterh@cafewalter.com>
Message-ID: <v3e8kn5v9r2q54@corp.supernews.com>
Source record: 38215
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

> I need a meter that will show FSD with a current of 200uA. I *have* a
> meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?

1. Get a meter that's more sensitive. Or:
2. Build an amplifier. Or:
3. Hope that internally, for some bizarre reason, your meter is actually very sensitive but it contains an internal shunt resistor which you can remove.

#3 is unlikely, IMHO.

This is an instance of "can't get something for nothing." You can always bleed off power into a shunt to make something less sensitive, but the opposite doesn't work. Realistically #1 is your best option.

713. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 01:33:36 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2801032035440001@c-66-176-144-254.se.client2.attbi.com>
Source record: 38216

In article <b17495$5td$1@slb9.atl.mindspring.net>, "Dan/W4NTI"
<w4nti@NOSPAMmindspring.com> wrote:

> When I was working at a Army Depot in the radio shop I was told by a
> Motorola rep that Motorola changed part numbers when they changed models.
> Which basically means that a 2N2222 could have hundreds of different
> Motorola part numbers.
>
> FWIW department. I used to look up in the Sylvania ECG book in the
> 'reverse' fashion. Meaning Id look up common generic transistors and
> compare them to the MPN.
>
> Dan/W4NTI
> "Jack Taylor" <n7oo@theriver.com> wrote in message
> news:b14r49$6qi$0@216.39.177.51...
> > I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number of
> > small signal Motorola part numbered devices that are fried. Such as
> M9652,
> > M9642, M9643. I've looked through some old ECG, NTE, etc. cross
> references
> > but no joy. Does anyone know of a substitution listing for these devices?
> >
> > 73 de Jack
> >
> >

The 9642/9643 can be replaced by 2n3904/2n3906 They are the cheaper
versions of the 9570/9571's used in the HT220, etc. If you want smd go
mmbt3904/3906. I used all of these in the MT500, EXPO and other radios
including APCOR.

Steve WB4CZR

714. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 01:55:17 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>
Source record: 38217
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
wrote:

>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>radiovintage@hotmail.com says...
>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>> DOS programs.
>> THANKS
>>
>>
>>
>
>If you want to run dos programs, why noy use dos?
>
>~Travis

If he's using Windows 95 his operating system is DOS. Windows 95 is
not an operating system.

715. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 02:17:04 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <b17dj0hem0@216.39.177.115>
Source record: 38218

Thanks fellows for all of the useful information! Have substituted 2N2222
and 2N2907 for the NPN and PNP devices which have restored their operation.
Today in town picked up a 2N3819 N channel FET and we'll see if that makes
the ex-M9652 stage happy.

73 de Jack

"Bruce Lane" <SpammersAreVermin@dev.nul> wrote in message
news:MPG.189fba345c1a1363989716@192.168.42.131...
> In article <b14r49$6qi$0@216.39.177.51>, n7oo@theriver.com says...
>
> > I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number
of
> > small signal Motorola part numbered devices that are fried. Such as
M9652,
> > M9642, M9643. I've looked through some old ECG, NTE, etc. cross
references
> > but no joy. Does anyone know of a substitution listing for these
devices?
>
> Don't know about a sub list, but I can tell you that the full
> number for that class of devices (with a '9' right after the 'M') would
> break out as 48-86xxxx, where xxxx is the four digits from your notes
> above.
>
> Example: M9642 is actually a 48-869642, M9643 is 48-869643, etc.
>
> FWIW: I happen to know at least two of those devices very well. The
> 9642 and 9643 are general-purpose NPN and PNP devices, respectively. You
> could probably substitute 2N2222 and 2N2907, respectively, and get away
> with it.
>
> Hope that helps.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

716. Re: Motorola device cross?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 02:19:44 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <4TGZ9.435109$FT6.86227547@news4.srv.hcvlny.cv.net>
Source record: 38219

Hi,

Be a little careful about simply putting the 48-86 on the front end of an M number. It is a common thing to do and usually works. Unfortunately on the older gear (pre Micor) there are a couple of other prefixes. We found this out the hard way when we got in 5,000 RF power transistors at $37.90 each instead of a bunch of 5 cent small signal parts. I suspect they are still sitting in a Motorola warehouse somewhere .....

Bob Camp
KB8TQ

"Bruce Lane" <SpammersAreVermin@dev.nul> wrote in message
news:MPG.189fba345c1a1363989716@192.168.42.131...
> In article <b14r49$6qi$0@216.39.177.51>, n7oo@theriver.com says...
>
> > I've 'inherited' a Motorola VHF Mitrek to repair. Am finding a number
of
> > small signal Motorola part numbered devices that are fried. Such as
M9652,
> > M9642, M9643. I've looked through some old ECG, NTE, etc. cross
references
> > but no joy. Does anyone know of a substitution listing for these
devices?
>
> Don't know about a sub list, but I can tell you that the full
> number for that class of devices (with a '9' right after the 'M') would
> break out as 48-86xxxx, where xxxx is the four digits from your notes
> above.
>
> Example: M9642 is actually a 48-869642, M9643 is 48-869643, etc.
>
> FWIW: I happen to know at least two of those devices very well. The
> 9642 and 9643 are general-purpose NPN and PNP devices, respectively. You
> could probably substitute 2N2222 and 2N2907, respectively, and get away
> with it.
>
> Hope that helps.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to

> what I have now..." (Taki Kogoma)

717. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 02:27:13 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E373C01.B8A1E207@mfi.net>
Source record: 38220
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Smokey wrote:
>
> On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
> wrote:
>
> >In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
> >radiovintage@hotmail.com says...
> >> I am looking for a CD of Windows 95 for my shack computer so I can run some
> >> DOS programs.
> >> THANKS
> >>
> >>
> >>
> >
> >If you want to run dos programs, why noy use dos?
> >
> >~Travis
>
> If he's using Windows 95 his operating system is DOS. Windows 95 is
> not an operating system.

No, its not, but 95 only installs part of DOS. You have to do a
separate install of the rest of the files.
--

Michael A. Terrell
Central Florida

718. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 02:45:59 UTC
From: NoBodyInParticular <goofy@goofball.net>
Message-ID: <3E374060.3060404@goofball.net>
Source record: 38221
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

wdg@[206.180.145.133] wrote:
> In article <1043793948.994447@cswreg.cos.agilent.com>
> donrm@soco.agilent.com writes:
>
>
>>In rec.radio.amateur.homebrew wdg@[206.180.145.133] wrote:
>>
>>>One of the biggest and most lucrative scams I've seen is the #6 welding
>>>cable for speaker leads and 1/0 welding cable for primary 12v power leads
>>>for these ghetto blasters the idiot kids are putting in their cars. Oh
>>>yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
>>>the public's utter stupidity.
>>
>
>>The fat speaker cable supposedly affords better speaker damping factor
>>with solid state amps -- wonder what the damping factor was when we were
>>using tube amplifiers and output transformers?
I remember one tube amp I owned that had a r/c network
connected between the output transformer secondary and the
drive stage just before the push-pull output stage. I guess
that took care of the damping.

>
>
> Damping, schmamping. #6 AWG welding cable for speaker leads is utter
> bullshit and conveniently ignores the fact that the leads between the
> connectors on the frame of the speaker and voice coil are #20 AWG or
> smaller and the voice coil itself is wound with #50 varnished magnet wire.
> Give me a break! With enough power in the amplifier you can burn out the
> voice coil and invert the freakin' cone in even a high quality speaker
> with nothing larger than #14 zip cord.

What? you're not using the 4/0 oxygen-free-copper? :-)

>
>>One dude I worked with said he could hear the difference between gold
>>plated and nickle plated RCA connectors.
>
>
> Oh my goodness yes, just like I can "see" the difference in picture
> quality between a homemade 10' jumper of RG6 Quad shield with cheap
> 2-piece (cap & ferrule) aluminum connectors vs the same length of "Monster
> Cable" and gold plated connectors that you pay $29.95 for. UHUH...
>

>
>>If you can't dazzle them with brilliance, baffle them with bullshit.
>
>
> In-freakin-credible
>

719. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 02:52:35 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E3741F2.DE239CCB@qth.com>
Source record: 38222
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

THIS is not a computer group, you geeks go ssomewhere else!! Its also not a
discussion group so go discuss somewhere else....PULEASSSSSEEEEE
what a bunch of crap

"Michael A. Terrell" wrote:

> Scott wrote:
> >
> > "Michael A. Terrell" wrote:
> > >
> > > Scott wrote:
> > > >
> > > > Technician wrote:
> > > > >
> > > > >
> > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > you should at least know how to work at a prompt, regardless of the
> > > > > programs need for it.
> > > > >
> > > > I was building XT's back in the day.
> > > >
> > > Real geeks format hard drives with debug :)
> > >
> > I got your geek...right here!!
> > >
> > -g=c800:5 (for WD)
>
> I like to ask the "Computer experts", What was the code for setting
> up a hard drive with debug, and seeing the blank stares. So much for an
> IT department. :) I rebuild and sold a lot of XT and PCs, and went
> through hundreds of used hard drives to test them using Debug. It was a
> good idea to do a half dozen or more machines at once, because it took
> so long to do a machine, and if one failed you stuck in another drive,
> and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> hard drives that predate the ST-506 interface. Geeky enough?
> --
>
> Michael A. Terrell
> Central Florida

[One or more binary attachments are retained only in the source text.]

720. RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:03:15 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E374473.D8495B00@qth.com>
Source record: 38223
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

I have an idea, why not just put all these guys address into the big "spammers" lists til they quit posting to rec.radio.swap and other groups that just dont need this anymore...anybody like the idea? Im real tired of seeing off topic in rec.radio.swap where it doesnt belong...R U? Murray

Robert Bonomi wrote:

> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> Scott <"remove \"!t\" to reply"> wrote:
> >
> >
> >
> >> > I am looking for a CD of Windows 95 for my shack computer so I can run some
> >> > DOS programs.
> >> > THANKS
> >> >
> >> >
> >> >
> >>
> >> If you want to run dos programs, why not use dos?
> >
> >
> >Because if the machine came up and on the screen was:
> >
> >C:\>
>
> C:\>
> C:\DOS>
> C:\DOS\RUN>
> RUN \DOS\RUN
>
> with apologies to Dick and Jane

[One or more binary attachments are retained only in the source text.]

721. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:18:56 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374820.BBF5F298@mfi.net>
Source record: 38224
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

```
Murray Neece wrote:
>
> THIS is not a computer group, you geeks go ssomewhere else!! Its also not a
> discussion group so go discuss somewhere else....PULEASSSSSEEEEE
> what a bunch of crap
>
> "Michael A. Terrell" wrote:
>
> > Scott wrote:
> > >
> > > "Michael A. Terrell" wrote:
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> > > > Scott wrote:
> > > > >
> > > > > Technician wrote:
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> > > > > >
> > > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > > you should at least know how to work at a prompt, regardless of the
> > > > > > programs need for it.
> > > > > >
> > > > > > I was building XT's back in the day.
> > > > >
> > > > > Real geeks format hard drives with debug :)
> > > >
> > > > I got your geek...right here!!
> > > >
> > > > -g=c800:5 (for WD)
> > >
> > > I like to ask the "Computer experts", What was the code for setting
> > > up a hard drive with debug, and seeing the blank stares. So much for an
> > > IT department. :) I rebuild and sold a lot of XT and PCs, and went
> > > through hundreds of used hard drives to test them using Debug. It was a
> > > good idea to do a half dozen or more machines at once, because it took
> > > so long to do a machine, and if one failed you stuck in another drive,
> > > and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> > > hard drives that predate the ST-506 interface. Geeky enough?
> > > --
> > >
> > > Michael A. Terrell
> > > Central Florida
```

Stop e-mailing me. I did not start this thread, and your sorry ass
is why I don't go to rec.radio.swap that group is nothing but a moron
pissing contest that I don't have the time to wade through. If you are
too stupid to ignore this, or any other thread that you dislike you can
just go back to sleep. People like you give hams a bad name.
--

Michael A. Terrell
Central Florida

722. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:32:09 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374B39.B82573FA@mfi.net>
Source record: 38225
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Moparholic@hotmailnospam.com wrote:
>
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Stop e-mailing me. I did not start this thread, and your sorry ass
> > is why I don't go to rec.radio.swap
> >
> It's cross posted to 7 groups.
>
> Smells like stink bait.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

Then complain to the OP, not me.
--

Michael A. Terrell
Central Florida

723. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:37:45 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374C89.DDF023A5@mfi.net>
Source record: 38226
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Moparholic@hotmailnospam.com wrote:
>
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Moparholic@hotmailnospam.com wrote:
> > >
> > > "Michael A. Terrell" <terrell@mfi.net> wrote:
> > > > Stop e-mailing me. I did not start this thread, and your sorry
> > > > ass is why I don't go to rec.radio.swap
> > > >
> > > It's cross posted to 7 groups.
> > >
> > > Smells like stink bait.
> > >
> > > --
> > > Go# 40 42 12
> > > ---------- http://NewsReader.Com/ ----------
> > > 50GB/Month
> >
> > Then complain to the OP, not me.
> >
> You're the dick head who responded.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

Whats wrong, did you have a lovers spat with Murry?

PLONK!
--

Michael A. Terrell
Central Florida

Since Topica won't remove me from mailing lists I didn't subscribe
to, I'm going to list them so other spammers can put them on their
lists.

affinity@get.topica.com directory@get.topica.com info@get.topica.com
jobs@get.topica.com partners@get.topica.com press@get.topica.com
sales@get.topica.com suggestions@get.topica.com support@get.topica.com

724. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:39:42 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E374CF0.6000401@socal.rr.com>
Source record: 38227
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Why not just learn to ignore it?

Murray Neece wrote:

>I have an idea, why not just put all these guys address into the big "spammers"
>lists til they quit posting to rec.radio.swap and other groups that just dont need
>this anymore...anybody like the idea? Im real tired of seeing off topic in
>rec.radio.swap where it doesnt belong...R U? Murray
>
>Robert Bonomi wrote:
>
>
>
>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
>>Scott <"remove \"!t\" to reply"> wrote:
>>
>>
>>>
>>>
>>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>If you want to run dos programs, why not use dos?
>>>>
>>>>
>>>Because if the machine came up and on the screen was:
>>>
>>>C:\>
>>>
>>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>>with apologies to Dick and Jane
>>

>>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

725. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:50:27 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <b8je3v4j3auqmd1aj8rrpandc66ic4icsk@4ax.com>
Source record: 38228
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Tue, 28 Jan 2003 19:15:45 +0000, the renowned Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

```
5V
+
1/4 LM324 |
|\|
o------+--------------|+\
IN | | >--+
.-. +-----|-/ |
| | | |/| .-.
390R| | | | |4K7
'-' | === | |
| | GND '-'
.-. | .-. |
Span +-->| | +-----( )-+
Trim 500R| | | .-. - '-' +
| '-' | | Meter
| | 180R| |
+----+ '+'
=== ===
GND GND
```

Best regards,

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

726. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:53:10 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E375025.7080003@ay.com.au>
Source record: 38229
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

FM wrote:
> I am looking for a CD of Windows 95 for my shack computer so I can run some
> DOS programs.

Crosspost to enough groups?

Why not just use MS-DOS 6.22, FreeDOS or Linux with dosemu depending on
how demanding the exactness of DOSiness you need.

MS-DOS 6.22 should be $5 or less now days. Win95 is still about $25 on
eBay and the like. Linux and FreeDOS are free with no moral issues like
warez copies of Microsoft OSs.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (12% of Full)

727. Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 03:54:49 UTC
From: j999w@aol.com
Message-ID: <20030128225449.22210.00000382@mb-ca.aol.com>
Source record: 38230

Anyone have any tips on making spider web wound coils for the AM BCB? (as used in xtal sets).

I need to build a very sharp bandpass filter to knock down local station overload on my MFJ1026 while I'm DXing the AM BCB. LC circuits built up from ferrite rods just aren't cutting it. I've got 5kw, 3 miles up the road on 1290khz that overloads the MFJ, and the best I can do is knock them down about 15db with a series LC circuit tuned at 760khz.That helps, but would like more. Stacking them two deep gives me around 20db, getting there, but I'm short on parts to do that. A band stop tuned at 1290khz will knock them down to a reasonable S9+20db (compared to a solid PEG!) , but the loss is way to great at 760khz to hear much of anything.

So, I'm thinking of using some spider web wound coils using Litz wire to improve the Q of my tuner. http://home.t-online.de/home/gollum/hcoils.htm

Ideas??

73,

John Wilke
WB9UAI

728. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 04:02:42 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E375254.2080301@socal.rr.com>
Source record: 38231
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

And that's the best you can do for a response?

Moparholic@hotmailnospam.com wrote:

>"Michael A. Terrell" <terrell@mfi.net> wrote:
>
>
>>PLONK!
>>
>>
>>
>Stupid fucker cross posts a plonk.
>
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

729. Re: Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 04:15:27 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E37555F.9060804@ay.com.au>
Source record: 38232

What kind of antenna are you using? If you've got a loop, how much does
putting the monster signal into a null give you? With the loop antenna
on my website I have little problem with local signals, even RFI.

J999w wrote:
> Anyone have any tips on making spider web wound coils for the AM BCB? (as used
> in xtal sets).
>
> I need to build a very sharp bandpass filter to knock down local station
> overload on my MFJ1026 while I'm DXing the AM BCB. LC circuits built up from
> ferrite rods just aren't cutting it. I've got 5kw, 3 miles up the road on
> 1290khz that overloads the MFJ, and the best I can do is knock them down about
> 15db with a series LC circuit tuned at 760khz.That helps, but would like more.
> Stacking them two deep gives me around 20db, getting there, but I'm short on
> parts to do that. A band stop tuned at 1290khz will knock them down to a
> reasonable S9+20db (compared to a solid PEG!) , but the loss is way to great at
> 760khz to hear much of anything.
>
> So, I'm thinking of using some spider web wound coils using Litz wire to
> improve the Q of my tuner. http://home.t-online.de/home/gollum/hcoils.htm
>
> Ideas??
>
> 73,
>
> John Wilke
> WB9UAI

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (12% of Full)

730. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 04:17:48 UTC
From: Jay <jay@hotmail.com>
Message-ID: <MBIZ9.48947$GX4.1954611@news2.east.cox.net>
Source record: 38233
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Well Murray...then leave. You will not be missed. Take your junk and
terrible attitude elsewhere.

"Murray Neece" <radioranch@qth.com> wrote in message
news:3E374473.D8495B00@qth.com...
> I have an idea, why not just put all these guys address into the big
"spammers"
> lists til they quit posting to rec.radio.swap and other groups that just
dont need
> this anymore...anybody like the idea? Im real tired of seeing off topic
in
> rec.radio.swap where it doesnt belong...R U? Murray
>
> Robert Bonomi wrote:
>
> > In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> > Scott <"remove \"!t\" to reply"> wrote:
> > >
> > >
> > >
> > > >> > I am looking for a CD of Windows 95 for my shack computer so I can
run some
> > > >> > DOS programs.
> > > >> > THANKS
> > > >> >
> > > >> >
> > > >> >
> > > >>
> > > >> If you want to run dos programs, why not use dos?
> > > >
> > > >
> > > >Because if the machine came up and on the screen was:
> > > >
> > > >C:\>
> > >
> > > C:\>
> > > C:\DOS>
> > > C:\DOS\RUN>
> > > RUN \DOS\RUN
> > >
> > > with apologies to Dick and Jane
> >

731. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 04:35:54 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <v3emghastlgi2f@corp.supernews.com>
Source record: 38234
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

KIDS!!!!

<Moparholic@hotmailnospam.com> wrote in message
news:20030128223525.770$gQ@newsreader.com...
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Moparholic@hotmailnospam.com wrote:
> > >
> > > "Michael A. Terrell" <terrell@mfi.net> wrote:
> > > > Stop e-mailing me. I did not start this thread, and your sorry
> > > > ass is why I don't go to rec.radio.swap
> > > >
> > > It's cross posted to 7 groups.
> > >
> > > Smells like stink bait.
> > >
> > > --
> > > Go# 40 42 12
> > > ---------- http://NewsReader.Com/ ----------
> > > 50GB/Month
> >
> > Then complain to the OP, not me.
> >
> You're the dick head who responded.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

732. How to determine if your HP 8405A vector voltmeter is operational & close to calibrated?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 05:29:45 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <dFJZ9.9379$to3.7762@rwcrnsc51.ops.asp.att.net>
Source record: 38235
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Are there simple tests to determine if this piece of gear is in "relatively"
good shape?

733. Re: Need crystal xtal formula for ht90 ht440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 07:07:15 UTC
From: John Smith <john@somewhere.com>
Message-ID: <b17uuuioa1@news1.usf.edu>
Source record: 38236
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Great! Thanks for the information!

"Bruce Lane" <SpammersAreVermin@dev.nul> wrote in message
news:MPG.189c70ebc41581d4989710@192.168.42.131...
> In article <b0t2pe$9gs$1@news1.usf.edu>, john@somewhere.com says...
>
> > Anyone out there with the correct formula for the crystals on a Motorola
> > ht90 (ht440)?
>
> Youbetcha.
>
> TX = Crystal F times 27
> RX = Crystal F times 8, plus the first IF (21.400MHz).
>
> International Crystal can provide rocks for ham freqs if you want.
> You should have the service manual and a service monitor handy to do the
> alignment.
>
> (SHAMELESS PLUG ALERT)
>
> If you do not have access to either of the above, I have both, and
> I can install the new rocks and tune the radio(s) up. See
> http://www.bluefeathertech.com/rf.html
>
> 73 de KC7GR
>
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

734. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 07:30:50 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <umse3v4alsstsvtdn0bg1jvhe50p2iiqio@4ax.com>
Source record: 38240
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Wed, 29 Jan 2003 03:50:27 GMT, Spehro Pefhany <speff@interlog.com>
opined thusly:

>On Tue, 28 Jan 2003 19:15:45 +0000, the renowned Paul Burridge
><redscar@waitrose.notthisbit.com> wrote:
>
> 5V
> +
> 1/4 LM324 |
> |\|
> o------+--------------|+\
> IN | | >--+
> .-. +-----|-/ |
> | | | |/| .-.
> 390R| | | | |4K7
> '-' | === | |
> | | GND '-'
> .-. | .-. |
> Span +-->| | +-----( )-+
> Trim 500R| | | .-. - '-' +
> | '-' | | Meter
> | | 180R| |
> +----+ '+'
> === ===
> GND GND

Thanks for that. One question, though: does it have to be +5v supply
or can I get away with +9v? I've always avoided disdainfully any form
of IC, you see wherever possible and therefore wouldn't know.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

735. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 07:59:12 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <632f3vkkmgtirnqagit59bh9trmeej9t3l@4ax.com>
Source record: 38242
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 29 Jan 2003 01:55:47 -0800, Winfield Hill <whill@picovolt.com>
opined thusly:

> Spef, very nice indeed! I especially like the elegant
> round meter.

I was most impressed too. How does one go about generating these
professional-looking ascii schematics? Is there a trick to it?

>Maybe I'd use a 200R pot for easier trimming
> of the 200uA shunt, +/-20% should be sufficient, right?
>
> Hmm, a 0.56mA meter? Curious value. Maybe that's not a
> very reliable number and a wide trim range is wise.

All I did was wind up a pot in series with a 9v battery, the meter and
a DVM until I got FSD. At that point, the DVM was reading 0.56mA. I
imagine the meter was designed to be 0,5mA, but... tolerance errors,
aging and all that. Still, having established the precise current
required for FSD, may as well use that to modify for 200uA.
:-)
--

"What is now proved was once only imagin'd"
- William Blake, 1793

736. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 08:06:20 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <sjte3vkpohoob4aed2aomnt7oh95t7se4g@4ax.com>
Source record: 38244
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Wed, 29 Jan 2003 02:45:59 GMT, NoBodyInParticular
<goofy@goofball.net> wrote:

>>>The fat speaker cable supposedly affords better speaker damping factor
>>>with solid state amps -- wonder what the damping factor was when we were
>>>using tube amplifiers and output transformers?
> I remember one tube amp I owned that had a r/c network
>connected between the output transformer secondary and the
>drive stage just before the push-pull output stage. I guess
>that took care of the damping.

The problem is that the _open_ loop voltage gain in the push-pull
stage is not very large, thus the closed loop output impedance is not
much less than the open loop output impedance. With a typical feedback
loop taken from the output transformer, the output impedance in many
tube amplifier could still be several ohms, so the damping factor
could be 1-5.

Paul

737. 10MHz filter at 15MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 09:07:51 UTC
From: brmadhukar@hotmail.com
Message-ID: <2c04c006.0301290107.4e881f3d@posting.google.com>
Source record: 38237

Hi,
I need to design a passive filter at 15MHz. The BW is 10MHz and I know that this is not a piece of cake. Normal single BPFs are not easy to be fabricated with available inductors.
I am trying a HPF + Buffer + LPF combination. The input/output impedance is 4K. I have chosen 100ohms a the output impedance of HPF and input of LPF to avoid large inductnce values. How should I use the buffer. Should it be hi impedance at input or matched to 100ohms and similarly at the output.
TIA
brmadhukar

738. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 09:15:12 UTC
From: Henry Cabot Henhouse III <sooper_chicken@hotmail.com>
Message-ID: <AYMZ9.82169$AV4.3442@sccrnsc01>
Source record: 38238
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Harry Conover" <hhc314@yahoo.com> wrote in message
news:7ce4e226.0301251512.3971bc7e@posting.google.com...
[snip]
>
> I'm now waiting to see the FTC crackdown on the claims of sellers of
> "Ionized Bracelets" and "Magnetic Pillows."
>
[snip]

I used to have a magnetic pillow. But the darn thing kept sticking to the
plate in my head.

739. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 09:55:47 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b188f3025kl@drn.newsguy.com>
Source record: 38239
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

```
Spehro wrote...
>
> the renowned Paul Burridge wrote:
>
>> I need a meter that will show FSD with a current of 200uA.
>> I *have* a meter that shows FSD at a current of 0.56mA.
>> Any suggestions, anyone?
>
> 5V
> +
> 1/4 LM324 |
> 1/2 LM358 |\|
> o------+--------------|+\
> IN | | >--+
> .-. +-----|-/ |
> | | | |/| .-.
> 390R| | | | |4K7
> '-' | === | |
> | | GND '-'
> .-. | .-. |
> Span +-->| | +-----( )-+
> Trim 500R| | | .-. - '-' +
> | '-' | | Meter
> | | 180R| |
> +----+ '+'
> | |
> === ===
> GND GND
>
> Best regards, Spehro Pefhany
```

Spef, very nice indeed! I especially like the elegant round meter. Maybe I'd use a 200R pot for easier trimming of the 200uA shunt, +/-20% should be sufficient, right?

Hmm, a 0.56mA meter? Curious value. Maybe that's not a very reliable number and a wide trim range is wise.

Thanks,
- Win

740. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 10:55:51 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <3lbf3vk5uu519pei0tsc7ud9omgav472f0@4ax.com>
Source record: 38148
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Wed, 29 Jan 2003 12:26:38 GMT, Spehro Pefhany <speff@interlog.com>
opined thusly:

>An LM7805 will turn 9V unregulated into 5V regulated. If you have
>9V regulated, just change the 4K7 to 10K.

Great. I'll give it a try.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

741. Re: 10MHz filter at 15MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 12:07:50 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E37C416.DD76AAF1@bloomer.net>
Source record: 38241

With a filter that wide compared to it's center frequency, why use a filter at all? You're trying to pass from 10-20 MHz? What are you trying to do? Is this at a receiver input and you're trying to use it to receive 30, 20, and 15 Meters?

Madhukar wrote:
>
> Hi,
> I need to design a passive filter at 15MHz. The BW is 10MHz and I
> know that this is not a piece of cake. Normal single BPFs are not easy
> to be fabricated with available inductors.
> I am trying a HPF + Buffer + LPF combination. The input/output
> impedance is 4K. I have chosen 100ohms a the output impedance of HPF
> and input of LPF to avoid large inductnce values. How should I use the
> buffer. Should it be hi impedance at input or matched to 100ohms and
> similarly at the output.
> TIA
> brmadhukar

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

742. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 12:09:51 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <7dgf3vsfnrq74l1mmlfgs0ki7kmqtgc8lg@4ax.com>
Source record: 38149
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Wed, 29 Jan 2003 15:01:16 GMT, Joe McElvenney
<ximac@btinternet.com> opined thusly:

>Hi,
>
>> I need a meter that will show FSD with a current of 200uA. I *have* a
>> meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?
>
> A 'funny' number like 0.56mA might suggest that it is a 'special'
>and maybe, only maybe, has an internal shunt already??

Indeed. As Walter has already suggested. It *is* a special meter made
by little-known company 'x' but badged by well-known company 'y'
specifically for their range of products. I took it apart to check,
but sadly no internal resistor. :-(
However, Spehro posted a useful little op-amp circuit that appears to
do the trick well enough. I've just simulated it with SPICE and get
-0.55u out for -200u in. I've no idea what the hell the units are
supposed to be in or what the signs mean, but it looks promising for
the breadboard. :-)
--

"What is now proved was once only imagin'd"
- William Blake, 1793

743. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 12:26:38 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <sohf3v034lqd8pdb612q4p33pi81jrljdb@4ax.com>
Source record: 38243
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Wed, 29 Jan 2003 07:30:50 +0000, the renowned Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Wed, 29 Jan 2003 03:50:27 GMT, Spehro Pefhany <speff@interlog.com>
>opined thusly:
>
>>On Tue, 28 Jan 2003 19:15:45 +0000, the renowned Paul Burridge
>><redscar@waitrose.notthisbit.com> wrote:
>>
>> 5V
>> +
>> 1/4 LM324 |
>> |\|
>> o------+--------------|+\
>> IN | | >--+
>> .-. +-----|-/ |
>> | | | |/| .-.
>> 390R| | | | |4K7
>> '-' | === | |
>> | | GND '-'
>> .-. | .-. |
>> Span +-->| | +-----( )-+
>> Trim 500R| | | .-. - '-' +
>> | '-' | | Meter
>> | | 180R| |
>> +----+ '+'
>> === ===
>> GND GND
>
>Thanks for that. One question, though: does it have to be +5v supply
>or can I get away with +9v? I've always avoided disdainfully any form
>of IC, you see wherever possible and therefore wouldn't know.

An LM7805 will turn 9V unregulated into 5V regulated. If you have
9V regulated, just change the 4K7 to 10K.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

744. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 14:57:38 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0301290657.26b880fb@posting.google.com>
Source record: 38245
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Henry Cabot Henhouse III" <sooper_chicken@hotmail.com> wrote in message
news:<AYMZ9.82169$AV4.3442@sccrnsc01>...
> "Harry Conover" <hhc314@yahoo.com> wrote in message
> news:7ce4e226.0301251512.3971bc7e@posting.google.com...
> [snip]
> >
> > I'm now waiting to see the FTC crackdown on the claims of sellers of
> > "Ionized Bracelets" and "Magnetic Pillows."
> >
> [snip]
>
>
> I used to have a magnetic pillow. But the darn thing kept sticking to the
> plate in my head.

I hate it when that happens to me! :-)

Harry C.

745. Re: Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 14:58:52 UTC
From: j999w@aol.com
Message-ID: <20030129095852.20788.00000021@mb-fb.aol.com>
Source record: 38246

>What kind of antenna are you using? If you've got a loop, how much does
>putting the monster signal into a null give you? With the loop antenna
>on my website I have little problem with local signals, even RFI.
>

I don't have any problem with overload when using my loop, but I would rather use my EWE's and large verticals which have better gain and more sensitive for super low angle DX (South America and Europe).

jw
wb9uai
(longing for the days of daytime only stations)

746. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 15:01:16 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000028.00f5b31d@btinternet.com>
Source record: 38147
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi,

> I need a meter that will show FSD with a current of 200uA. I *have* a
> meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?

A 'funny' number like 0.56mA might suggest that it is a 'special'
and maybe, only maybe, has an internal shunt already??

Cheers - Joe

747. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 16:50:51 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <ba1g3vo6oibgkrqp8rnojuql4nsflg21ho@4ax.com>
Source record: 38150
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Wed, 29 Jan 2003 15:01:16 GMT, the renowned Joe McElvenney
<ximac@btinternet.com> wrote:

>Hi,
>
>> I need a meter that will show FSD with a current of 200uA. I *have* a
>> meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?
>
> A 'funny' number like 0.56mA might suggest that it is a 'special'
>and maybe, only maybe, has an internal shunt already??

Or a damaged, poorly made, or measured, 500uA movement. Around 1mA is
a good trade-off for ruggedness vs. sensitivity. It's possible the OP
forgot to take into account the drop across the internal resistance of
the movement, or the current shunt on this range of his meter has been
damaged.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

748. Re: Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 17:19:33 UTC
From: Allodoxaphobia <nobody@jonz.net>
Message-ID: <slrnb3g393.517.nobody@animas.frontier.net>
Source record: 38151

On 29 Jan 2003 03:54:49 GMT, J999w hath writ:
> Anyone have any tips on making spider web wound coils for the AM BCB? (as used
> in xtal sets).
>
> I need to build a very sharp bandpass filter to knock down local station
> overload on my MFJ1026 while I'm DXing the AM BCB. LC circuits built up from
> ferrite rods just aren't cutting it.
> I've got 5kw, 3 miles up the road on 1290khz that overloads the MFJ,
^^^^^^^^^^^^
Do you have it even when the antenna(s) is/are disconnected?
You'd better solve _that_ before you spend a lot of time
trying to notch it out on the incoming feedline(s).

Random thought: Can a person make a _suck-out_ trap
using crystals?

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

749. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 18:32:12 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <M6VZ9.3$hG6.615@twister.southeast.rr.com>
Source record: 38152
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

I couldnt find a connector for mine so I just pushed the wire into the socket. It has been one of those things I have been trying to get around to doing better but will probably will evolve into a permanent temporary fix.

"Ed Bailen" <n5kzw@arrl.net> wrote in message news:3e36b7f0.6140309@news.ev1.net...
> The best advice I got (after the fact, unfortunately) was to get a
> 9-pin subminiature-D female connector kit from RadioShack. You want
> the ones with loose pins. Make your solder connection to the solder
> cups on the female contacts and then slip them oveer the pins on the
> back of the DIN connector. You could also slip a piece of heat shrink
> over the contact before pushing on to the DIN pins.
>
> Regards,
> Ed - N5KZW
>
> On Fri, 24 Jan 2003 10:19:53 -0500, Scott <scott2rp789@netscape.net>
> wrote:
>
> >Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> >3 and 4 to get some line level audio from the rig. I could not believe
> >my eyes when I got the 13 pin DIN - is there some trick to soldering to
> >those pins? Or am I missing something here? Thanks - Scott.
> >
>

750. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 18:35:03 UTC
From: "J. Clarke" <nospam1@nospam.invalid>
Message-ID: <b196su01duh@enews4.newsguy.com>
Source record: 38154
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <1043793948.994447@cswreg.cos.agilent.com>,
donrm@soco.agilent.com says...
> In rec.radio.amateur.homebrew wdg@[206.180.145.133] wrote:
> > One of the biggest and most lucrative scams I've seen is the #6 welding
> > cable for speaker leads and 1/0 welding cable for primary 12v power leads
> > for these ghetto blasters the idiot kids are putting in their cars. Oh
> > yes, the 1 Farad (yes, a whole Farad) capacitor only serves to underscore
> > the public's utter stupidity.
>
> The fat speaker cable supposedly affords better speaker damping factor
> with solid state amps -- wonder what the damping factor was when we were
> using tube amplifiers and output transformers?
>
> Think that's bad? Take a look at http://www.essentialsound.com/ for the
> most expensive extension cords in history.
>
> One dude I worked with said he could hear the difference between gold
> plated and nickle plated RCA connectors.
>
> If you can't dazzle them with brilliance, baffle them with bullshit.
>
> Don Montgomery
> donrm@soco.agilent.com

Hmm. I sense a new market or three here. That cord doesn't do you any good without audiophile wiring going all the way back to the power plant. And it needs an audiophile-quality generator powered by an audiophile-quality dam or steam engine or nuclear reactor. Since it is unlikely that the power companies will install such equipment just to cater to the relatively small market of superior individuals who can understand the need for such things, then it becomes necessary to take the power issue directly in hand with an audiophile-quality diesel generator, which only meets spec if powered by audiophile-quality diesel fuel (can't use a natural-gas generator--can't trust the gas company to deliver audiophile-quality gas).

Then there is the audiophile-quality breaker panel that needs audiophile-quality breakers, and the audiophile-quality receptacle . . .

How much do you think one could get for wiring up a house with audiophile-quality power? $50K? 100? And how much should one charge for audiophile-quality diesel fuel, $50/gallon?

--
--
--John
Reply to jclarke at ae tee tee global dot net
(used to be jclarke at eye bee em dot net)

751. Re: Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 18:41:13 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E38200D.CD0CCD35@verizon.net>
Source record: 38153

J999w wrote:

> Anyone have any tips on making spider web wound coils for the AM BCB? (as used
> in xtal sets).
>
> I need to build a very sharp bandpass filter to knock down local station
> overload on my MFJ1026 while I'm DXing the AM BCB. LC circuits built up from
> ferrite rods just aren't cutting it. I've got 5kw, 3 miles up the road on
> 1290khz that overloads the MFJ, and the best I can do is knock them down about
> 15db with a series LC circuit tuned at 760khz.That helps, but would like more.
> Stacking them two deep gives me around 20db, getting there, but I'm short on
> parts to do that. A band stop tuned at 1290khz will knock them down to a
> reasonable S9+20db (compared to a solid PEG!) , but the loss is way to great at
> 760khz to hear much of anything.
>
> So, I'm thinking of using some spider web wound coils using Litz wire to
> improve the Q of my tuner. http://home.t-online.de/home/gollum/hcoils.htm
>
> Ideas??
>
> 73,
>
> John Wilke
> WB9UAI

You will do much better with either a notch filter or an elliptical LPF.

Dale W4OP

752. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 19:24:26 UTC
From: Mark Fergerson <mfergerson1@cox.net>
Message-ID: <3E382AF7.9020603@cox.net>
Source record: 38155
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

J. Clarke wrote:

> Hmm. I sense a new market or three here. That cord doesn't do you any
> good without audiophile wiring going all the way back to the power
> plant. And it needs an audiophile-quality generator powered by an
> audiophile-quality dam or steam engine or nuclear reactor. Since it is
> unlikely that the power companies will install such equipment just to
> cater to the relatively small market of superior individuals who can
> understand the need for such things, then it becomes necessary to take
> the power issue directly in hand with an audiophile-quality diesel
> generator, which only meets spec if powered by audiophile-quality diesel
> fuel (can't use a natural-gas generator--can't trust the gas company to
> deliver audiophile-quality gas).

No, no, no! Nothing less than good, old-fashioned,
emotionally atisfying _coal-fired steam_ will do! Of course,
running homopolar generators for pure DC to feed the
toobs... oh, and they can argue the merits of distilled vs.
spring water.

> Then there is the audiophile-quality breaker panel that needs
> audiophile-quality breakers, and the audiophile-quality receptacle . . .

I see a stand-alone unit; no more "noisy" house wiring
issues, just feed the boiler and hear the music. Portability
is for plebes, after all.

> How much do you think one could get for wiring up a house with
> audiophile-quality power? $50K? 100? And how much should one charge
> for audiophile-quality diesel fuel, $50/gallon?

One would have to frex ship in German coal for Bach,
naturally. Maybe they could be convinced to burn AOL CD's
when listening to Cage?

Mark L. Fergerson

753. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 19:45:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gbqio3ob4a84@corp.supernews.com>
Source record: 38156

The 2200 series was designed to be made at low manufacturing cost, and in my opinion they cut too many corners on some of the models. I had a 2215 for a while, and got rid of it. It had things like overshoot that changed as the variable attenuator was adjusted. The specification was apparently carefully written so that these sorts of anomalies were still within the specs, but compared to the many other Tek scopes I've used, the overall performance was disappointing. I've had a 2246 for quite a few years now, and like it a lot. So some of the 2200 series scopes are definitely better than others.

If I were in the shoes of the original poster, I'd take the advice several people have given, and look for a 465. I believe it was the top selling Tek scope ever, and for good reason. The only weak point I'm aware of is that some of the switch contacts (for the lever switches) are heavily gold plated circuit board traces. When they wear out (which takes a *lot* of use), they can't be replaced, and if a worn one serves a vital function, the scope's a goner.

Roy Lewallen, W7EL

Paul Burridge wrote:
> On Sun, 26 Jan 2003 17:25:17 -0800, Bruce Lane
> <SpammersAreVermin@dev.nul> opined thusly:
>
>
>>In article <MqVY9.44958$4y2.2161@sccrnsc04>, swells244@insightbb.com
>>says...
>>
>>
>>>ok guys whats a good inexpenesive scope for the home bench?Juet some trouble
>>>shooting and kit building.
>>>Steve
>>
>> I will freely admit to being a Tektronix bigot. ;-)
>
>
> I'm not. I'm currently using a 2225 which somebody gave me for nothing
> (and still not worth it) until I can find something suitable to buy,
> but it seems to lose the plot completely on the higher timebase
> settings. It's also not very user-friendly.
> Before that I used a Hameg (German made) 20Mhz scope, which was a
> piece of cake to use and gave marvelously stable, low-noise waveforms.
> Both the scopes were made in the late 80s and no doubt the Tek cost
> more, but I still got on much better with the old Hameg.

754. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 19:52:42 UTC
From: mikea@mikea.ath.cx
Message-ID: <b19beaqav12@puck.litech.org>
Source record: 38157
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In <b196su01duh@enews4.newsguy.com> (rec.radio.amateur.homebrew), J. Clarke wrote:

> How much do you think one could get for wiring up a house with
> audiophile-quality power? $50K? 100? And how much should one charge
> for audiophile-quality diesel fuel, $50/gallon?

A whole new market indeed! I can just see the folks at the
refinery, paid minimum wage, of course, warping the little
benzene rings into chair or boat configurations, one at a time.
And making sure that the electron spins in all the C atoms have
matched spins, and so on.

"Audiophile-grade diesel fuel! Matched spins, all rings in 'boat'
configuration, *only* $5000/gallon. We're way ahead of second-
best!"

Somehow I don't think this fuel will be homebrewed.

Next we need to try to sell 'em low-noise batteries[1] for their
battery-driven all-DC glowbug audio gear.

[1] Honestly, I read a paper from NBS (now NIST) in the 1960s in
which the authors bemoaned the noise from their batteries,
and how it interfered with their very delicate measurements.

--
Fairy Tails start "Once upon a time."
Army/Sea stories start "This is no shit."
Software proposals start "1.0."
-- Joe Zeff, in a.s.r.

755. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 21:02:58 UTC
From: hollaar@faith.cs.utah.edu
Message-ID: <b19fi2$4qa$1@coward.ks.cc.utah.edu>
Source record: 38158
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

For a look at how far things have actually gone, look at:
http://english.aopen.com.tw/products/mb/Pax4b-533tube1.htm

It's not a joke picture. Here's the product description:
http://www.aopen.com/products/mb/ax4b-533tube.htm

756. Hughes germanium diode ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 21:40:35 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v3giimeu1is361@corp.supernews.com>
Source record: 38159

Going thru my junk box I found an small 2 1/2" by 3" envelope marked HUGHES DIODES Type MP 3016, Hughes Aircraft, Semiconductor Division, Culver City, CA. I think the MP means matched pair. Inside are two pretty standard looking glass diodes like the old 1N34, 1N60 but they are color coded brown, white, gray meaning ?1N198. My search for MP 3016 or 1N198 reveals nothing. I wonder if they're audio, video or lo microwave. Does anyone out there have any info?
tnx
hank wd5jfr

757. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 21:41:58 UTC
From: g0mem <mikedt-remove.spamtrap-@vizzavi.co.uk>
Message-ID: <YUXZ9.781$PE1.338@news-binary.blueyonder.co.uk>
Source record: 38160
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Lee Hollaar" <hollaar@faith.cs.utah.edu> wrote in message
news:b19fi2$4qa$1@coward.ks.cc.utah.edu...
> For a look at how far things have actually gone, look at:
> http://english.aopen.com.tw/products/mb/Pax4b-533tube1.htm
>
> It's not a joke picture. Here's the product description:
> http://www.aopen.com/products/mb/ax4b-533tube.htm

Is that the onboard graphics processor?? Designed to give the PC an
authentic feel for when your running an ENIAC or EDSAC emulator?? ;-)

Mike Turner
G0MEM

758. Re: Hughes germanium diode ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-29 22:52:46 UTC
From: donrm@soco.agilent.com
Message-ID: <1043880766.702287@cswreg.cos.agilent.com>
Source record: 38161

Henry Kolesnik <wd5jfr@oklahoma.net> wrote:
> Going thru my junk box I found an small 2 1/2" by 3" envelope marked HUGHES
> DIODES Type MP 3016, Hughes Aircraft, Semiconductor Division, Culver City,
> CA. I think the MP means matched pair. Inside are two pretty standard
> looking glass diodes like the old 1N34, 1N60 but they are color coded brown,
> white, gray meaning ?1N198. My search for MP 3016 or 1N198 reveals nothing.
> I wonder if they're audio, video or lo microwave. Does anyone out there
> have any info?

My 1981 D.A.T.A.Book says the 1N198 is germanium. PIV = 80V,
10uA@10V@25C Ir, 1pF cap, 80mW diss, point contact. Looks
like plain old generic part. Ten manufacturers. The databook
is silent on the MP 3016; knowing HAC Semi, it might be a
special marking house number for a customer.

73 Don K6LTS
donrm@soco.agilent.com

759. Re: Spider web wound coils??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 00:27:39 UTC
From: j999w@aol.com
Message-ID: <20030129192739.06519.00000388@mb-fh.aol.com>
Source record: 38162

>You will do much better with either a notch filter or an elliptical LPF.
>
>Dale W4OP
>

I can definitely knock their sig down farther with a notch filter, but I also knock down the rest of the band by quite a bit. Hence the need for a narrower device.

No problem with 'no' antenna, but with wires, that MFJ1026 gets clobbered.

jw
wb9uai

760. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 01:16:56 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b19udr$1ogob$1@hades.csu.net>
Source record: 38163
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Michael A. Terrell wrote:
[snip]

> My first
> night working at the transmitter site I drove up the long private road,
> and my radio started playing. It had an open output transistor, but
> the B-C junction was rectifying the RF, and it was quite loud, and
> distorted.

That's like when I went to high school, there was a 5kW AM transmitter
in a plant nursery next to the high school. Some people said that you
could hear the voice of the radio station if you put your ear up to the
door, which was wood coated with a sheet of steel. I never could
confirm that, tho. The guys and I went over to the radio station, but
there was a whole big bunch of bees swarming so we got the hell outta there.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

761. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 01:45:15 UTC
From: mikea@mikea.ath.cx
Message-ID: <b1a03b$kl0$3@puck.litech.org>
Source record: 38164
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In <YUXZ9.781$PE1.338@news-binary.blueyonder.co.uk> (rec.radio.amateur.homebrew), g0mem wrote:

> "Lee Hollaar" <hollaar@faith.cs.utah.edu> wrote in message
> news:b19fi2$4qa$1@coward.ks.cc.utah.edu...
> > For a look at how far things have actually gone, look at:
> > http://english.aopen.com.tw/products/mb/Pax4b-533tube1.htm
> >
> > It's not a joke picture. Here's the product description:
> > http://www.aopen.com/products/mb/ax4b-533tube.htm

> Is that the onboard graphics processor?? Designed to give the PC an
> authentic feel for when your running an ENIAC or EDSAC emulator?? ;-)

I first saw this in ... September, 2002, IIRC. I boggled then,
and I'm still boggling.

--
I think it likely that when the successor to IPV6 is just about to be deployed
througout the Solar System there will still be null routes and deny table
entries for 205.199.212.0/24 in an uncountable number of places.
-- Michael Rathbun <mdr@mail-abuse.org>

762. Re: 10MHz filter at 15MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 01:52:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0301291752.403e5e6d@posting.google.com>
Source record: 38165

brmadhukar@hotmail.com (Madhukar) wrote in message
news:<2c04c006.0301290107.4e881f3d@posting.google.com>...
> Hi,
> I need to design a passive filter at 15MHz. The BW is 10MHz and I
> know that this is not a piece of cake. Normal single BPFs are not easy
> to be fabricated with available inductors.
> I am trying a HPF + Buffer + LPF combination. The input/output
> impedance is 4K. I have chosen 100ohms a the output impedance of HPF
> and input of LPF to avoid large inductnce values. How should I use the
> buffer. Should it be hi impedance at input or matched to 100ohms and
> similarly at the output.

4k is a fairly high impedance for 10-20MHz. 2pF is about -j4000 at
20MHz, so if you aren't careful, stray capacitance will mess you up.
If you have a choice, I'd say to work at lower impedance: 100 ohms
should be OK.

What sort of attenuation do you need beyond the passband? What sort
of passband ripple can you accept? What sort of phase linearity do
you need? Those things will determine what types of filter and what
filter orders will work for you. I recently did an 11th order
elliptical lowpass filter at roughly those frequencies, at 50 ohms,
and all the component values were reasonable: ~3/4" diameter coils
with between 4 and 7 turns, and little C0G ceramic caps. It's really
helpful if you have a network analyzer to aid in tuning the filters
up. There's not necessarily a need for a buffer between the HPF and
the LPF.

Cheers,
Tom

763. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 02:26:30 UTC
From: Joe Bento <joseph-nospam-@kirtland.com>
Message-ID: <f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com>
Source record: 38166
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
<terrell@mfi.net> wrote:

>Scott wrote:
>>
>> Technician wrote:
>> >
>> >
>> > No offence, but if you are going to run DOS programs, my opinion is that
>> > you should at least know how to work at a prompt, regardless of the
>> > programs need for it.
>>
>> I was building XT's back in the day.
>
> Real geeks format hard drives with debug :)

oh yes...

wasn't it something like:

C:>DEBUG

-
-g=c800:5

It's been a VERY LONG time since I did that!

Joe

Remove the -nospam- to send e-mail
joseph-nospam-@kirtland.com

764. MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 02:52:30 UTC
From: pdrunen@aol.com
Message-ID: <20030129215230.29321.00000315@mb-cf.aol.com>
Source record: 38167

Hi Group,

Anyone doing anything with converting old micro-wave ovens to 2.4GHz amplifiers for AO-40 Satellite work?

Also, is the power supply components any good for making a HF linear? I see alot of old units at the flea markets.

KJ4UO

765. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 03:49:53 UTC
From: Ken Bessler <kg0wx@yahoo.com>
Message-ID: <Bh1_9.47297$Vh.30252@news2.central.cox.net>
Source record: 38168
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Joe Bento" <joseph-nospam-@kirtland.com> wrote in message
news:f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com...
> On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
> <terrell@mfi.net> wrote:
>
> oh yes...
>
> wasn't it something like:
>
> C:>DEBUG
>

Well duh, what else would it be? Sheesh....

C:\prompt pg$t

766. Re: 10MHz filter at 15MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 04:19:01 UTC
From: brmadhukar@hotmail.com
Message-ID: <2c04c006.0301292019.182b5592@posting.google.com>
Source record: 38169

Scott <acepilot@bloomer.net> wrote in message news:<3E37C416.DD76AAF1@bloomer.net>...
> With a filter that wide compared to it's center frequency, why use a
> filter at all? You're trying to pass from 10-20 MHz? What are you
> trying to do? Is this at a receiver input and you're trying to use it to
> receive 30, 20, and 15 Meters?

Hi this is for a high precision GPS receiver. It requires such a bandwidth.

767. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 04:29:35 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <0yidnZM9dve0N6WjXTWcoQ@comcast.com>
Source record: 38170
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Joe Bento wrote:
> C:>DEBUG
>
> -
> -g=c800:5
>
> It's been a VERY LONG time since I did that!

What happened if your supplier slipped you some DTC's?

768. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 04:54:08 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <v3hbuesuavmn0e@corp.supernews.com>
Source record: 38171
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Mark Fergerson" <mfergerson1@cox.net> wrote in message
news:3E382AF7.9020603@cox.net...
> J. Clarke wrote:
>
> > Hmm. I sense a new market or three here. That cord doesn't do you any
> > good without audiophile wiring going all the way back to the power
> > plant.

You may think you're kidding, but on one of the golden-ears wacko audio
newsgroups someone cited a magazine review where the guy actually had
all his home AC wiring replaced (all the way out to the pole). Of course, at
that point you are transformer-isolated from the rest of the grid(!)

769. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:44:46 UTC
From: <>
Message-ID: <iZ2_9.31316$A%3.394197@ord-read.news.verio.net>
Source record: 38172
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>Robert Bonomi wrote:
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>
>Run where? DOS is single-tasking. It can't think ahead.

"Run" as in "execute", silly.

Back in those days, there were several programming 'languages' that
"compiled" the source code in to a compact representation, and which
required a "run-time interpreter" to actually execute it. This provided
for 'hardware independance, because you could move the "compiled" programs
to any system where the 'run-time interpreter' had been implemented.

A couple of the better-known examples of this approach were "Business Basic",
and "dBase".

Both of those languages provided a MS-DOS program called "RUN.EXE" which _was_
the "run-time interpreter". You really _did_ do things like "run invoice.prg".

>Remember the big upgrade with WIN95? Being able to
>download a file and send it straight to the floppy drive!

I could do that under DOS 1.1, using the KERMIT comm. program.

I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
writing to the 'current' floppy, sometimes to the 'other' one (when the
machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
upon a time, that _was_ a "high end" machine :)

I had to write a special program to do it on a "PC jr", because _that_
box was deliberately crippled and couldn't service the serial-port
interrupe _while_ writing a sector to disk. Thus, had to do an [XOFF]
before issuing the disk write, and an [XON] after it finished.

770. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:49:15 UTC
From: "J. Clarke" <nospam1@nospam.invalid>
Message-ID: <b1aed142oe0@enews2.newsguy.com>
Source record: 38179
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <v3hbuesuavmn0e@corp.supernews.com>, rcrowley7@xprt.net
says...
>
> "Mark Fergerson" <mfergerson1@cox.net> wrote in message
> news:3E382AF7.9020603@cox.net...
> > J. Clarke wrote:
> >
> > > Hmm. I sense a new market or three here. That cord doesn't do you any
> > > good without audiophile wiring going all the way back to the power
> > > plant.
>
> You may think you're kidding, but on one of the golden-ears wacko audio
> newsgroups someone cited a magazine review where the guy actually had
> all his home AC wiring replaced (all the way out to the pole). Of course, at
> that point you are transformer-isolated from the rest of the grid(!)

Geez, I completely forgot about those audiophile-grade transformers.

--
--
--John
Reply to jclarke at ae tee tee global dot net
(used to be jclarke at eye bee em dot net)

771. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:51:16 UTC
From: <>
Message-ID: <o33_9.31317$A%3.394128@ord-read.news.verio.net>
Source record: 38173
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <MPG.18a0c04b2ea7914498974e@news.megalink.net>,
Technician <travis57@megalink.net> wrote:
>In article <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>, scott@scotti.sh!t
>says...
>>
>>
>> Robert Bonomi wrote:
>> >
>> > C:\>
>> > C:\DOS>
>> > C:\DOS\RUN>
>> > RUN \DOS\RUN
>> >
>> > with apologies to Dick and Jane
>>
>>
>> Run where? DOS is single-tasking. It can't think ahead.
>> Remember the big upgrade with WIN95? Being able to
>> download a file and send it straight to the floppy drive!
>>
>
>Remember when customizing your computing environment meant just changing
>the prompt?
>I always thought it funny to give it a Unix style prompt.
>"prompt $$"
>or for the current Linux Bash prompt
>"prompt [root@host.net $P] $$"

The _really_ funny one was to, in a computer *store* -- praticularly one
like the computer department of a Sears (where the help usually was *not*
terribly computer-literate -- set the prompt to the 'screen erase' sequence,
after making sure that 'ansi.sys' was loaded.

It was simply _amazing_ how many supposedly "knowledgable" salespersons were
utterly unable to cope with, and/or "fix" that particular "gotcha".

772. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:54:25 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <NkmdnRGAqdKWI6WjXTWcrg@comcast.com>
Source record: 38174
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
>
> The _really_ funny one was to, in a computer *store* -- praticularly one
> like the computer department of a Sears (where the help usually was *not*
> terribly computer-literate -- set the prompt to the 'screen erase' sequence,
> after making sure that 'ansi.sys' was loaded.
>
> It was simply _amazing_ how many supposedly "knowledgable" salespersons were
> utterly unable to cope with, and/or "fix" that particular "gotcha".

Was that \"(ESC)[2J\" ?

773. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:56:21 UTC
From: Joe Bento <joseph-nospam-@kirtland.com>
Message-ID: <vleh3v4pkltmigrcial85u66v01ndfimdl@4ax.com>
Source record: 38176
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Wed, 29 Jan 2003 23:29:35 -0500, Scott <scott@scotti.sh!t> wrote:

>
>
>Joe Bento wrote:
>> C:>DEBUG
>>
>> -
>> -g=c800:5
>>
>> It's been a VERY LONG time since I did that!
>
>
>What happened if your supplier slipped you some DTC's?

I never used a DTC drive. I looked through an old reference just now though, and it looks as though DTC used the same command as Western Digital.

IIRC, the original 10meg drive that came with my XT used the command g=c800:1

It's been too long that I don't recall the difference between the :1 or :5 part of the command, and can now find no reference to the :1.

I still remember "upgrading" to a 30meg drive that cost me a fortune (for me) of $300 at the time, and hearing the steady click, click... as the stepper motor slowly rotated during the low-level format process.

Joe

Remove the -nospam- to send e-mail
joseph-nospam-@kirtland.com

774. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 05:56:40 UTC
From: <>
Message-ID: <s83_9.31318$A%3.394286@ord-read.news.verio.net>
Source record: 38175
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I have a better idea. in three parts:
1) why don't you *stop* posting in HTML, since it just makes your posts
an average of *FOUR*TIMES* larger than they need to be?
2) recommend you learn to use the 'killfile' capability of your newsreader,
so you can pre-emptively 'ignore' threads and authors that bore you.
3) recommend that the rest of the world consider using _their_ killfile
capabilities to 'ignore' those with their nose so bent out of shape
about a little humor.

I'll start.

plonk

(that's the sound of an author's name hitting the the 'kill file', Murray)

In article <3E374473.D8495B00@qth.com>,
Murray Neece <radioranch@qth.com> wrote:
>-=-=-=-=-=-
>
>I have an idea, why not just put all these guys address into the big "spammers"
>lists til they quit posting to rec.radio.swap and other groups that just
>dont need
>this anymore...anybody like the idea? Im real tired of seeing off topic in
>rec.radio.swap where it doesnt belong...R U? Murray
>
>Robert Bonomi wrote:
>
>> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
>> Scott <"remove \"!t\" to reply"> wrote:
>> >
>> >
>> >
>> >> > I am looking for a CD of Windows 95 for my shack computer so I
>can run some
>> >> > DOS programs.
>> >> > THANKS
>> >> >
>> >> >
>> >> >
>> >>
>> >> If you want to run dos programs, why not use dos?
>> >
>> >
>> >Because if the machine came up and on the screen was:

>> >
>> >C:\>
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>-=-=-=-=-=-
>[Attachment type=text/x-vcard, name=radioranch.vcf]
>-=-=-=-=-=-

775. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:01:16 UTC
From: <>
Message-ID: <Mc3_9.31319$A%3.394308@ord-read.news.verio.net>
Source record: 38177
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>,
Smokey <smokey@truck.stop> wrote:
>On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
>wrote:
>
>>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>>radiovintage@hotmail.com says...
>>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>>> DOS programs.
>>> THANKS
>>>
>>>
>>>
>>
>>If you want to run dos programs, why noy use dos?
>>
>>~Travis
>
>If he's using Windows 95 his operating system is DOS. Windows 95 is
>not an operating system.

Neither is MS-DOS (it's merely a 'glorified progam loader').

It is said:

"Windows is a 32-bit graphical interface,
for a 16-bit extension,
to an 8-bit operating system,
written for a 4-bit processor,
by a 2-bit company,
without 1 bit of skill in what they were doing."

Methinks the description is somewhat _generous_.

776. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:04:21 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <D-ecnciv0t3CXaWjXTWcog@comcast.com>
Source record: 38178
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:

> I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
> writing to the 'current' floppy, sometimes to the 'other' one (when the
> machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
> upon a time, that _was_ a "high end" machine :)

I had the loaded XT with 2 360K floppies, 20MB ST225, multi I/O card,
CGA adapter and CGA monitor. I had a 286-12 with EGA and a 40MB ST4051.
I had a 386DX/40 with 2 Maxtor full height 140MB XT1140 drives. The
damn MFM cables would get flaky over time. My first IDE drive bought
around that time was a 1.2GB that cost $250. Being in the business,
I get good stuff at the right price. No Pavilions or emachines or
Dells or Gateways or Aptivas for me. You can buy that sh!t. I won't.

I'm ending this crossposted thread here. Have a gooder.

777. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:10:47 UTC
From: <>
Message-ID: <HI3_9.31321$A%3.394224@ord-read.news.verio.net>
Source record: 38180
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com>,
Joe Bento <joseph-nospam-@kirtland.com> wrote:
>On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
><terrell@mfi.net> wrote:
>
[[.. munch ..]]
>>
>> Real geeks format hard drives with debug :)
>
>oh yes...
>
>wasn't it something like:
>
>C:>DEBUG
>
>-
>-g=c800:5
>

Some controllers had "advanced" utilities accessible via

-g=c800:8

and the "c800' wasn't necessarily reliable. it could be "whatever"
the base address for the on-board ROM was set as. usually via
jumpers, so you could have more than one controller in the system.

778. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:24:38 UTC
From: <>
Message-ID: <Gy3_9.31322$A%3.394177@ord-read.news.verio.net>
Source record: 38181
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <vleh3v4pkltmigrcial85u66v01ndfimdl@4ax.com>,
Joe Bento <joseph-nospam-@kirtland.com> wrote:
>On Wed, 29 Jan 2003 23:29:35 -0500, Scott <scott@scotti.sh!t> wrote:
>
>>
>>
>>Joe Bento wrote:
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>>>
>>> -
>>> -g=c800:5
>>>
>>> It's been a VERY LONG time since I did that!
>>
>>
>>What happened if your supplier slipped you some DTC's?
>
>I never used a DTC drive. I looked through an old reference just now
>though, and it looks as though DTC used the same command as Western
>Digital.
>
>IIRC, the original 10meg drive that came with my XT used the command
>g=c800:1

impossible. the first 5 bytes of the ROM were 'reserved'.

the first 2 are an "identifying signature" for the 'start of ROM'
hex "55 AA"
the 3rd byte is the size of the ROM in 'paragraphs'
the 4th and 5th are a 'short jump' instruction to the start of the
ROM 'power-up initialization' code.

The "POST" bios code scans all 'high' memory, looking for the 'signature'
on paragraph boundaries. when it finds one, it a) does a 'far call' to
{base_address}:3, and b) when that returns, skips over the declared size
of the ROM, before continuing the search for more 'signatures'.

Sometimes there were 'multiple' entry points in the ROM, usually at
3-byte intervals up from xxxx:5. I know I used some that had "advanced"
configuration stuff at xxxx:8.

>
>It's been too long that I don't recall the difference between the :1
>or :5 part of the command, and can now find no reference to the :1.

>
>I still remember "upgrading" to a 30meg drive that cost me a fortune
>(for me) of $300 at the time, and hearing the steady click, click...
>as the stepper motor slowly rotated during the low-level format
>process.
>
>
>Joe
>
>Remove the -nospam- to send e-mail
>joseph-nospam-@kirtland.com
>
>

779. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:41:30 UTC
From: <>
Message-ID: <uO3_9.31323$A%3.394012@ord-read.news.verio.net>
Source record: 38182
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <NkmdnRGAqdKWI6WjXTWcrg@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>Robert Bonomi wrote:
>>
>> The _really_ funny one was to, in a computer *store* -- praticularly one
>> like the computer department of a Sears (where the help usually was *not*
>> terribly computer-literate -- set the prompt to the 'screen erase' sequence,
>> after making sure that 'ansi.sys' was loaded.
>>
>> It was simply _amazing_ how many supposedly "knowledgable" salespersons were
>> utterly unable to cope with, and/or "fix" that particular "gotcha".
>
>
>Was that \"(ESC)[2J\" ?

These days, "I dunno" applies. I don't keep that stuff memorized.

However, consulting my Unix 'termcap' file, it looks like the
requisite magic is:

prompt=$E[;H$E[2J

the first escape sequence 'homes' the cursor (top-left corner),
then the second one does an 'erase from cursor position to end of screen'

780. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 06:46:46 UTC
From: Tim Hubberstey <sendme@no.spam>
Message-ID: <3E38CACA.6D46659F@no.spam>
Source record: 38183
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

```
Spehro Pefhany wrote:
>
> On Wed, 29 Jan 2003 07:30:50 +0000, the renowned Paul Burridge
> <redscar@waitrose.notthisbit.com> wrote:
>
> >On Wed, 29 Jan 2003 03:50:27 GMT, Spehro Pefhany <speff@interlog.com>
> >opined thusly:
> >
> >>On Tue, 28 Jan 2003 19:15:45 +0000, the renowned Paul Burridge
> >><redscar@waitrose.notthisbit.com> wrote:
> >>
> >> 5V
> >> +
> >> 1/4 LM324 |
> >> |\|
> >> o------+--------------|+\
> >> IN | | >--+
> >> .-. +-----|-/ |
> >> | | | |/| .-.
> >> 390R| | | | | |4K7
> >> '-' | === | |
> >> | | GND '-'
> >> .-. | .-. |
> >> Span +-->| | +-----( )-+
> >> Trim 500R| | | .-. - '-' +
> >> | '-' | | Meter
> >> | | 180R| |
> >> +----+ '+'
> >> === ===
> >> GND GND
> >
> >Thanks for that. One question, though: does it have to be +5v supply
> >or can I get away with +9v? I've always avoided disdainfully any form
> >of IC, you see wherever possible and therefore wouldn't know.
>
> An LM7805 will turn 9V unregulated into 5V regulated. If you have
> 9V regulated, just change the 4K7 to 10K.

I don't see why you should have to use a regulated supply at all. The
PSRR for a LM324 at this gain is good enough that a simple bypass cap
should be be sufficient. Am I missing something?
--
Tim Hubberstey, P.Eng. . . . . Hardware/Software Consulting Engineer
```

Marmot Engineering . . . . . VHDL, ASICs, FPGAs, embedded systems
Vancouver, BC, Canada . . . . . http://www.marmot-eng.com

781. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 07:22:42 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <3qjh3vgdkeju8ib9vj5ctlo06eu3gnvd5m@4ax.com>
Source record: 38184
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Thu, 30 Jan 2003 06:46:46 GMT, the renowned Tim Hubberstey
<sendme@no.spam> wrote:

>I don't see why you should have to use a regulated supply at all. The
>PSRR for a LM324 at this gain is good enough that a simple bypass cap
>should be be sufficient. Am I missing something?

I've selected the resistor in series with the meter to allow only
moderate over-current. If the power supply voltage is varying all over
the place, it might saturate and give incorrect readings or give it
enough current to bend the needle. A 25 cent 7805 is an effortless and
reliable prophylactic against such problems, without requiring any
more information from the OP.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

782. MAX2680 400MHz to 2.5GHz downconverter mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 09:14:44 UTC
From: Steffen <steffen@rrsg.ee.uct.ac.za>
Message-ID: <b1aqgf$5as$1@news.adamastor.ac.za>
Source record: 38185

Hello,
I need to mix down an incoming 900MHz signal. For downconverting I want to use the MAX2680. Does someone has experience with this component? Or does someone knows a better mixer than the MAX2680 for this frequency?

Thanks in advance

Steffen Brink

783. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 10:16:22 UTC
From: Henry Cabot Henhouse III <sooper_chicken@hotmail.com>
Message-ID: <WX6_9.88140$rM2.46415@rwcrnsc53>
Source record: 38186
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

if they design the case with the right air circulation, the heat from the
tube will keep the processor warm on those chilly winter nights...

"g0mem" <mikedt-remove.spamtrap-@vizzavi.co.uk> wrote in message
news:YUXZ9.781$PE1.338@news-binary.blueyonder.co.uk...
>
> "Lee Hollaar" <hollaar@faith.cs.utah.edu> wrote in message
> news:b19fi2$4qa$1@coward.ks.cc.utah.edu...
> > For a look at how far things have actually gone, look at:
> > http://english.aopen.com.tw/products/mb/Pax4b-533tube1.htm
> >
> > It's not a joke picture. Here's the product description:
> > http://www.aopen.com/products/mb/ax4b-533tube.htm
>
> Is that the onboard graphics processor?? Designed to give the PC an
> authentic feel for when your running an ENIAC or EDSAC emulator?? ;-)
>
> Mike Turner
> G0MEM
>
>

784. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 10:22:11 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <c4qh3vss92q1c6jlm6ha6qt0agco4s6h36@4ax.com>
Source record: 38098
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Wed, 29 Jan 2003 13:35:03 -0500, J. Clarke <nospam1@nospam.invalid>
wrote:

>Hmm. I sense a new market or three here. That cord doesn't do you any
>good without audiophile wiring going all the way back to the power
>plant. And it needs an audiophile-quality generator powered by an
>audiophile-quality dam or steam engine or nuclear reactor. Since it is
>unlikely that the power companies will install such equipment just to
>cater to the relatively small market of superior individuals who can
>understand the need for such things, then it becomes necessary to take
>the power issue directly in hand with an audiophile-quality diesel
>generator, which only meets spec if powered by audiophile-quality diesel
>fuel (can't use a natural-gas generator--can't trust the gas company to
>deliver audiophile-quality gas).

A diesel engine will run on practically any kind of oil, so why not
grow some oil plants on your farm and have a full control how the oil
is produced.

Paul

785. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 10:24:27 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <v37_9.6412$Tu2.21371@news-server.bigpond.net.au>
Source record: 38187

PDRUNEN wrote:

> Anyone doing anything with converting old micro-wave ovens to 2.4GHz amplifiers
> for AO-40 Satellite work?

Not really possible, but I once saw a site where a HAM had locked a
microwave magnetron and did some experiments. I think the verdict was
'lots of power, but too bloody hard to use'.

> Also, is the power supply components any good for making a HF linear? I see
> alot of old units at the flea markets.

Yes, but they are also a great way to kill yourself, particuarly if you
take out the shunts, you can pull amps off the HT into a nice plasma flame.

786. Re: Tank circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 10:53:52 UTC
From: Wouter Visser <wfvisser@dds.nl>
Message-ID: <3E390440.CBDA2BAB@dds.nl>
Source record: 38188

Thanks guys,

So, predicting the actual total loop gain of a real world design is going to be difficult due to the many unkowns (stray capacitances, Q, transistor gain manufacturing spread etc), the best procedure would be to empirically find the smallest value of capacitor in the feedback path that will provide reliable operation?

Regards,
Wouter.

787. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 11:44:01 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <5e8_9.225911$pDv.197147@news04.bloor.is.net.cable.rogers.com>
Source record: 38189
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

J. Clarke wrote:

> Geez, I completely forgot about those audiophile-grade transformers.
>

I suppose the stuff that horses drop should be called "audiopiles". ;-)

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

788. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 11:46:13 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <9g8_9.225916$pDv.76716@news04.bloor.is.net.cable.rogers.com>
Source record: 38190
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Mike Andrews wrote:

> [1] Honestly, I read a paper from NBS (now NIST) in the 1960s in
> which the authors bemoaned the noise from their batteries,
> and how it interfered with their very delicate measurements.
>

Many years ago, my high school electronics teacher, used to work in a lab for GE. His problem was streetcars going by, which disturbed his measurements.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with james.knott.

789. I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 12:52:33 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E392011.59187D34@qth.com>
Source record: 38191
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

That YOU IDIOTS would carry this conversation on these groups indicates your disdain for any rules of decency on the groups...You and Scott should get on a chat group for socially un acceptable computer geeks and leave the radio groups alone. AMERICA unite and blast these guys at thier home email sites...PLEASE!!

Robert Bonomi wrote:

> I have a better idea. in three parts:
> 1) why don't you *stop* posting in HTML, since it just makes your posts
> an average of *FOUR*TIMES* larger than they need to be?
> 2) recommend you learn to use the 'killfile' capability of your newsreader,
> so you can pre-emptively 'ignore' threads and authors that bore you.
> 3) recommend that the rest of the world consider using _their_ killfile
> capabilities to 'ignore' those with their nose so bent out of shape
> about a little humor.
>
> I'll start.
>
> *plonk*
>
> (that's the sound of an author's name hitting the the 'kill file', Murray)
>
> In article <3E374473.D8495B00@qth.com>,
> Murray Neece <radioranch@qth.com> wrote:
> >-=-=-=-=-=-
> >
> >I have an idea, why not just put all these guys address into the big "spammers"
> >lists til they quit posting to rec.radio.swap and other groups that just
> >dont need
> >this anymore...anybody like the idea? Im real tired of seeing off topic in
> >rec.radio.swap where it doesnt belong...R U? Murray
> >
> >Robert Bonomi wrote:
> >
> >> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> >> Scott <"remove \"!t\" to reply"> wrote:
> >> >
> >> >
> >> >
> >> > I am looking for a CD of Windows 95 for my shack computer so I
> >can run some
> >> > DOS programs.

> >> >> > THANKS
> >> >> >
> >> >> >
> >> >> >
> >> >>
> >> >> If you want to run dos programs, why not use dos?
> >> >
> >> >
> >> >Because if the machine came up and on the screen was:
> >> >
> >> >C:\>
> >>
> >> C:\>
> >> C:\DOS>
> >> C:\DOS\RUN>
> >> RUN \DOS\RUN
> >>
> >> with apologies to Dick and Jane
> >
> >-=-=-=-=-=-
> >[Attachment type=text/x-vcard, name=radioranch.vcf]
> >-=-=-=-=-=-

[One or more binary attachments are retained only in the source text.]

790. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:11:40 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b1b8ac01m09@drn.newsguy.com>
Source record: 38194
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Spehro Pefhany wrote...
>
> the renowned Tim Hubberstey wrote:
>
>> I don't see why you should have to use a regulated supply at all.
>> The PSRR for a LM324 at this gain is good enough that a simple
>> bypass cap should be be sufficient. Am I missing something?
>
> I've selected the resistor in series with the meter to allow only
> moderate over-current. If the power supply voltage is varying all
> over the place, it might saturate and give incorrect readings or
> give it enough current to bend the needle. A 25 cent 7805 is an
> effortless and reliable prophylactic against such problems,
> without requiring any more information from the OP.

Good thinking. I usually use a 78L05 in such spots, a convenient
TO-92 just like another "transistor," etc (p/n = LM78L05Z). Also,
whereas the 7805 takes about 5mA quiescent current, the 78L05 only
takes 3mA. Hmm, the I wonder if the OP's 9V supply is a battery?
An even lower current might be appropriate, such as 0.2mA from an
LM2936Z-5.0, etc. Furthermore, a battery can sink to only 6V at
its end of life, but the 2936 is also a low-dropout regulator,
under 200mV. http://www.national.com/pf/LM/LM2936-5.0.html

Oops, oh-oh, I feel another one of those increasingly-frequent
depletion-mode MOSFET attacks coming on!

Spehro wrote...
>
> the renowned Paul Burridge wrote:
>
>> I need a meter that will show FSD with a current of 200uA.
>> I *have* a meter that shows FSD at a current of 0.56mA.
>> Any suggestions, anyone?
>
> 5V
> +
> 1/4 LM324 |
> 1/2 LM358 |\|
> o------+--------------|+\
> IN | | >----, LND150
> .-. +-----|-/ |
> | | | |/| '--|
> 390R| | | | ,->||

```
> '-' | === +--||--,
> | | GND | |
> .-. | .-. +------'
> Span +-->| | +-----( )---'
> Trim 500R| | | .-. - '-' +
> | '-' | | Meter
> | | 180R| |
> +----+ '+'
> | |
> === ===
> GND GND
```

I edited Spef's drawing, replacing the 4k7 with a Supertex LND150.
http://www.supertex.com/pdf/datasheets/LND150.pdf Hmm, perhaps a
470R in the FET's source lead would be a good idea, to limit the
maximum current to about 0.8mA, instead of 1.5 to 3mA.

Thanks,
- Win

791. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:26:06 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3e3b26e8.79491893@news.easynews.com>
Source record: 38192
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Thu, 30 Jan 2003 06:52:33 -0600, Murray Neece <radioranch@qth.com>
wrote:

>That YOU IDIOTS would carry this conversation on these groups indicates your disdain
>for any rules of decency on the groups...You and Scott should get on a chat group
>for socially un acceptable computer geeks and leave the radio groups alone. AMERICA
>unite and blast these guys at thier home email sites...PLEASE!!
>

Why is this such a problem for you? If you don't like the
subject, don't read it. No one is forcing you to read anything on
Usenet If anyone needs to be blasted, its you. Please don't post
messages with your VCF attachment, this is not a binaries news group.
By the way, you started this off topic thread. Your such an IDIOT
that you would carry on this conversation on these groups indicates
your disdain for any rules of decency on the groups.

792. Re: Tank circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:26:53 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <us6i3v8lofqgp6tnh2aelrbhop5revr9eb@4ax.com>
Source record: 38108

On Thu, 30 Jan 2003 11:53:52 +0100, Wouter Visser <wfvisser@dds.nl>
opined thusly:

>Thanks guys,
>
>So, predicting the actual total loop gain of a real world design is going to
>be difficult due to the many unkowns (stray capacitances, Q, transistor gain
>manufacturing spread etc), the best procedure would be to empirically find
>the smallest value of capacitor in the feedback path that will provide
>reliable operation?

From what I recall, most definitely. Unless you're working to a proven
design, of course. Paracitics/strays lurk everywhere at RF; not just
on circuit boards and component leads but within components
themselves. Some proven oscillator designs use the internal
capacitance of the active device to provide all the feedback necessary
to function without recourse to external f/back circuitry and you'd
wonder how the hell they work if you weren't aware of that. It depends
to a great extent on the characteristics of the active device used.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

793. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:26:54 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <uf7i3vooo2b30193ib72gr3hd85k0bgu2p@4ax.com>
Source record: 38109

On Thu, 30 Jan 2003 10:24:27 GMT, Alan Yates <alany@ay.com.au> opined
thusly:

>PDRUNEN wrote:
>
>> Anyone doing anything with converting old micro-wave ovens to 2.4GHz amplifiers
>> for AO-40 Satellite work?
>
>Not really possible, but I once saw a site where a HAM had locked a
>microwave magnetron and did some experiments. I think the verdict was
>'lots of power, but too bloody hard to use'.
>
>> Also, is the power supply components any good for making a HF linear? I see
>> alot of old units at the flea markets.
>
>Yes, but they are also a great way to kill yourself, particuarly if you
>take out the shunts, you can pull amps off the HT into a nice plasma flame.

Some chap also stated a while back on this group that those
nice-looking, beefy transformers are actually no good for use beyond
20 minutes at a time as the primary windings have too few turns. Seems
a shame. :-(

--

"What is now proved was once only imagin'd"
- William Blake, 1793

794. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:33:01 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <MLWcnQB2x_satKSjXTWc3Q@comcast.com>
Source record: 38193
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
> >
> >Was that \"(ESC)[2J\" ?
>
> These days, "I dunno" applies. I don't keep that stuff memorized.
>
> However, consulting my Unix 'termcap' file, it looks like the
> requisite magic is:
>
> prompt=$E[;H$E[2J
>
> the first escape sequence 'homes' the cursor (top-left corner),
> then the second one does an 'erase from cursor position to end of screen'

I did mine from memory. ESCAPE LEFT-BRACKET 2 J came to mind.

ESCAPE LEFT-BRACKET ; H. That's move the cursor home.

I wrote ansi.sys screens for people back then.

OK. Back to the 21st century. I'm done with this thread.

795. By Special Request...for Murray only

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:36:00 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <MLWcnQN2x_ukt6SjXTWc3Q@comcast.com>
Source record: 38195
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

For someone who thinks his poop smells like roses...

```
*******
* *
* *
*********
* *
* *
* *
******* *******
* * * *
* * * ******
* * * * *
****** * * * * *
* * * * * * *
* * * *
* * *
* *
* *
* *
* *
* *
```

From the USENET newsgroups that you pissed on.

796. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 13:39:43 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3e3c2ba3.80703295@news.easynews.com>
Source record: 38196
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Thu, 30 Jan 2003 06:01:16 GMT, bonomi@c-ns. (Robert Bonomi) wrote:

>In article <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>,
>Smokey <smokey@truck.stop> wrote:
>>On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
>>wrote:
>>
>>>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>>>radiovintage@hotmail.com says...
>>>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>> DOS programs.
>>>> THANKS
>>>>
>>>>
>>>>
>>>
>>>If you want to run dos programs, why noy use dos?
>>>
>>>~Travis
>>
>>If he's using Windows 95 his operating system is DOS. Windows 95 is
>>not an operating system.
>
>Neither is MS-DOS (it's merely a 'glorified progam loader').
>
>
>It is said:
>
> "Windows is a 32-bit graphical interface,
> for a 16-bit extension,
> to an 8-bit operating system,
> written for a 4-bit processor,
> by a 2-bit company,
> without 1 bit of skill in what they were doing."
>
>
>Methinks the description is somewhat _generous_.

So what would be on your list of operating systems then?

797. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 14:05:22 UTC
From: Frank Bemelman <bemelmanx@euronet.nl.invalid>
Message-ID: <3e39312a$0$57487$1b62eedf@news.euronet.nl>
Source record: 38097
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Paul Burridge" <redscar@waitrose.notthisbit.com> schreef in bericht
news:632f3vkkmgtirnqagit59bh9trmeej9t3l@4ax.com...
> On 29 Jan 2003 01:55:47 -0800, Winfield Hill <whill@picovolt.com>
> opined thusly:
>
> > Spef, very nice indeed! I especially like the elegant
> > round meter.
>
> I was most impressed too. How does one go about generating these
> professional-looking ascii schematics? Is there a trick to it?

Here's the tool you need:
http://www.tech-chat.de/AAcircuit.html

--
Thanks,
Frank Bemelman
(remove 'x' & .invalid when sending email)

798. 73 Mag. August 1979, need info from.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 14:28:47 UTC
From: Martin <marty1kay@earthlink.net>
Message-ID: <zEa_9.4758$Wu1.361859@newsread1.prod.itd.earthlink.net>
Source record: 38099
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have what's left of a crowbar that has a note on the pcb: "73 mag 8/79". There is an unidentified SCR on the board and a couple of components missing which must have been a pot and resistor in series used to adjust the firing voltage on the gate.

Would anyone have a copy of that issue? It probably has the circuit and component values in it.

I'd appreciate it if you could tell me what the values of those missing items might be.

Marty K1FHR

799. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 15:00:35 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <abfi3v8emrtemkr0bbojvkoja01kmg2u77@4ax.com>
Source record: 38100
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 30 Jan 2003 05:11:40 -0800, the renowned Winfield Hill
<whill@picovolt.com> wrote:

> Oops, oh-oh, I feel another one of those increasingly-frequent
> depletion-mode MOSFET attacks coming on!

Perhaps you should write to Digikey and ask them to carry the Supertex
line. I, also, have an issue with the MOQ for SMT parts, and an
application where they are close to the only game in town. I found
them receptive (though they've not yet done it) to taking on the
Lumileds line.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

800. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 15:13:44 UTC
From: jwb@kirtland.com
Message-ID: <3e3940e5.1784403186@news.cis.dfn.de>
Source record: 38103
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Mon, 27 Jan 2003 22:41:35 -0500, Scott <scott@scotti.sh!t> wrote:

>
>
>Robert Bonomi wrote:
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>
>Run where? DOS is single-tasking. It can't think ahead.
>Remember the big upgrade with WIN95? Being able to
>download a file and send it straight to the floppy drive!

I remember back in 1990 or so, I ran Desqview to "multitask" is DOS,
running a two-line BBS quite sucessfully.

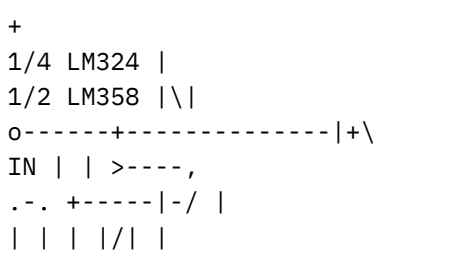
Joe

801. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 15:15:27 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3e394169$0$1341$626a54ce@news.free.fr>
Source record: 38102
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Winfield Hill <whill@picovolt.com> a crit dans le message :
b1b8ac01m09@drn.newsguy.com...
> Spehro Pefhany wrote...
> >
> > the renowned Tim Hubberstey wrote:
> >
> >> I don't see why you should have to use a regulated supply at all.
> >> The PSRR for a LM324 at this gain is good enough that a simple
> >> bypass cap should be be sufficient. Am I missing something?
> >
> > I've selected the resistor in series with the meter to allow only
> > moderate over-current. If the power supply voltage is varying all
> > over the place, it might saturate and give incorrect readings or
> > give it enough current to bend the needle. A 25 cent 7805 is an
> > effortless and reliable prophylactic against such problems,
> > without requiring any more information from the OP.
>
> Good thinking. I usually use a 78L05 in such spots, a convenient
> TO-92 just like another "transistor," etc (p/n = LM78L05Z). Also,
> whereas the 7805 takes about 5mA quiescent current, the 78L05 only
> takes 3mA. Hmm, the I wonder if the OP's 9V supply is a battery?
> An even lower current might be appropriate, such as 0.2mA from an
> LM2936Z-5.0, etc. Furthermore, a battery can sink to only 6V at
> its end of life, but the 2936 is also a low-dropout regulator,
> under 200mV. http://www.national.com/pf/LM/LM2936-5.0.html
>
> Oops, oh-oh, I feel another one of those increasingly-frequent
> depletion-mode MOSFET attacks coming on!
>

He he, I was just waiting the moment you couldn't refrain...
However a simple more common Jfet is enough in this low voltage app.
An even more common 5.6V zener and a resistor will do the trick with less
dispersion on the current limit.



```
390R| | | | |
'-' | === |
| | GND |
| | |
| +----->Z------+
| | 5.6V zen |
| | |
| | | |
| | | | select for 3V drop
| | | | (with the meter)at 0.5mA
.-. | .-. |
Span +-->| | +-----( )---'
Trim 500R| | | .-. - '-' +
| '-' | | Meter
| | 180R| |
+----+ '+'
| |
=== ===
GND GND
```

Fred.

```
> Spehro wrote...
> >
> > the renowned Paul Burridge wrote:
> >
> >> I need a meter that will show FSD with a current of 200uA.
> >> I *have* a meter that shows FSD at a current of 0.56mA.
> >> Any suggestions, anyone?
> >
> > 5V
> > +
> > 1/4 LM324 |
> > 1/2 LM358 |\|
> > o------+--------------|+\
> > IN | | >----, LND150
> > .-. +-----|-/ |
> > | | | |/| '--|
> > 390R| | | | ,->||
> > '-' | === +--||--,
> > | | GND | |
> > .-. | .-. +------'
> > Span +-->| | +-----( )---'
> > Trim 500R| | | .-. - '-' +
> > | '-' | | Meter
> > | | 180R| |
> > +----+ '+'
> > | |
> > === ===
> > GND GND
>
```

> I edited Spef's drawing, replacing the 4k7 with a Supertex LND150.
> http://www.supertex.com/pdf/datasheets/LND150.pdf Hmm, perhaps a
> 470R in the FET's source lead would be a good idea, to limit the
> maximum current to about 0.8mA, instead of 1.5 to 3mA.
>
> Thanks,
> - Win
>

802. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 16:01:13 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b1bi890301p@drn.newsguy.com>
Source record: 38106
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

```
fred bartoli wrote...
>
> An even more common 5.6V zener and a resistor will do the trick
> with less dispersion on the current limit.
>
> 9V
> +
> 1/4 LM324 |
> 1/2 LM358 |\|
> o------+--------------|+\
> IN | | >----,
> .-. +-----|-/ |
> | | | |/| |
> 390R| | | | |
> '-' | === |
> | | GND |
> | | |
> | +----->Z------+
> | | 5.6V zen |
> | | | |
> | | | | select for 3V drop
> | | |_| (with meter) at 0.5mA
> .-. | .-. |
> Span +-->| | +-----( )---'
> Trim 500R| | | .-. - '-' +
> | '-' | | Meter
> | | 180R| |
> +----+ '+'
> | |
> === ===
> GND GND
```

Yes, Fred, very good. I like that one even more.

Thanks,
- Win

803. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 16:13:34 UTC
From: Idontwantspam@net
Message-ID: <3e394acb.8905265@news.bellatlantic.net>
Source record: 38104
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Thu, 30 Jan 2003 11:46:13 GMT, James Knott <bit_bucket@rogers.com>
wrote:

>Mike Andrews wrote:
>
>> [1] Honestly, I read a paper from NBS (now NIST) in the 1960s in
>> which the authors bemoaned the noise from their batteries,
>> and how it interfered with their very delicate measurements.
>>
>Many years ago, my high school electronics teacher, used to work in a lab
>for GE. His problem was streetcars going by, which disturbed his
>measurements.
>
Well, in a true story:

Some years ago, a world famous university in Cambridge Mass, founded
in 1630, was building a new Earth Sciences Building.

Because one of the labs planned for that building was going to do
extremely precise measurements of the Earth's magnetic field, they
very carefully made sure all of the building fixtures, plumbing,
electrical, hardware and so on, were made of non-ferrous metals,
avoiding steel and iron which would interfere with their measurements.

Then the exterior of the building was done with red bricks.

(The red color in bricks is from iron oxide.)

This minor goof of overlooking one mundane material made all of the
other careful precautions meaningless.

In a personal true story:

I worked in a semiconductor processing lab, and one of our measuring
devices had a terrible problem with inconsistent measurements. It
measured device profiles in hundreds or dozens of &#65533;ngstroms, with a 5
&#65533; resolution. There was too much vibration, not only in the building,
but from the highway outside. The higher frequency vibrations from the
building were dealt with by putting the profilometer on a heavy marble
table, but we were still getting problems with low frequency
vibrations from trucks hitting potholes in the highway (we could hear
this as well, from 300 yards and through two glass walls). I ended up
adding a secondary platform suspended on a rubber which absorbed the
low frequency vibrations. This combination finally solved the problem,
and the device was able to produce measurements within its specs.

Sometimes you have to be that picky.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

804. Re: Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 16:14:57 UTC
From: Glynn Furr <GFURR1@nc.rr.com>
Message-ID: <5cc_9.4340$hG6.141444@twister.southeast.rr.com>
Source record: 38105

James,

I have tried several times to email you and all messages are bounced. Could
you email me directly at k4rki at arrl dot net. I could then use "reply" to
send my info to you.

Thanks,
Glynn ..
"James" <jamesf@xxxnec.com.au> wrote in message
news:1043707761.794821@busy.neca.nec.com.au...
> Hi Glynn,
>
> You can email me directly at:
>
> James_Fenech @ telstra.com.au.
>
> Sorry the shematic isn't too readable, it was only put on the net on
request
> of someone on the newsgroup. Someone in the UK was intouch with me a while
> ago and was trying to clean up the circuit, but I haven't heard from them
> for a while.
>
> Basically, the timing components aren't critical. Using the smallest
> resistor allowed by your flavour 4046 (I used the 74HC4046), and a large
pot
> will allow for the greatest range available.
>
> I'll try to dig up some component values.
>
> James.
>
> "Glynn Furr" <GFURR1@nc.rr.com> wrote in message
> news:p9DY9.104099$eB1.4026292@twister.southeast.rr.com...
> > I need to get in touch with James Fenech or anyone who has built his
> > "Wobbulator" as described at
> > http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The
> > problem I have is that I am unable to read or make out the resistor or
> > capacitor values he has drawn around the 4046. Possibly if someone has a
> > clearer jpg of the schematic or a parts list they could help me out.
> >
> > Thanks in advance for all help,
> >
> > Glynn also k4rki@arrl.net
> >
> >

>
>

805. Re: 73 Mag. August 1979, need info from.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 16:55:44 UTC
From: Eskay <ve3juaNO@SPAMrac.ca>
Message-ID: <3E395910.3010706@SPAMrac.ca>
Source record: 38107
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have the Mag and will look through it..
See if I can find what you are after..
73 de Sieb,VE3JUA..

Martin wrote:
> I have what's left of a crowbar that has a note on the pcb: "73 mag
> 8/79". There is an unidentified SCR on the board and a couple of
> components missing which must have been a pot and resistor in series used to
> adjust the firing voltage on the gate.
>
> Would anyone have a copy of that issue? It probably has the circuit and
> component values in it.
>
> I'd appreciate it if you could tell me what the values of those missing
> items might be.
>
> Marty K1FHR
>
>

806. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 18:00:34 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E396842.AE2B418C@crosslink.net>
Source record: 38101
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Ahhh, something on topic: digital communications!

Scott wrote:
>
> For someone who thinks his poop smells like roses...
>
> *******
> * *
> * *
> *********
> * *
> * *
> * *
> ******* *******
> * * * *
> * * * ******
> * * * * *
> ****** * * * * *
> * * * * * * *
> * * * *
> * * *
> * *
> * *
> * *
> * *
> * *
>
> From the USENET newsgroups that you pissed on.

807. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 18:01:21 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <3E396871.3060405@mailcity.moc>
Source record: 38112
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Take the rec.antiques.radio+phono out of this discussion.

Scott wrote:
>
> Robert Bonomi wrote:
>
>
>>I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
>>writing to the 'current' floppy, sometimes to the 'other' one (when the
>>machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
>>upon a time, that _was_ a "high end" machine :)
>
>
> I had the loaded XT with 2 360K floppies, 20MB ST225, multi I/O card,
> CGA adapter and CGA monitor. I had a 286-12 with EGA and a 40MB ST4051.
> I had a 386DX/40 with 2 Maxtor full height 140MB XT1140 drives. The
> damn MFM cables would get flaky over time. My first IDE drive bought
> around that time was a 1.2GB that cost $250. Being in the business,
> I get good stuff at the right price. No Pavilions or emachines or
> Dells or Gateways or Aptivas for me. You can buy that sh!t. I won't.
>
> I'm ending this crossposted thread here. Have a gooder.

808. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 18:38:06 UTC
From: "J. Clarke" <nospam1@nospam.invalid>
Message-ID: <b1brem029t0@enews1.newsguy.com>
Source record: 38111
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <c4qh3vss92q1c6jlm6ha6qt0agco4s6h36@4ax.com>, keinanen@sci.fi
says...
> On Wed, 29 Jan 2003 13:35:03 -0500, J. Clarke <nospam1@nospam.invalid>
> wrote:
>
>
> >Hmm. I sense a new market or three here. That cord doesn't do you any
> >good without audiophile wiring going all the way back to the power
> >plant. And it needs an audiophile-quality generator powered by an
> >audiophile-quality dam or steam engine or nuclear reactor. Since it is
> >unlikely that the power companies will install such equipment just to
> >cater to the relatively small market of superior individuals who can
> >understand the need for such things, then it becomes necessary to take
> >the power issue directly in hand with an audiophile-quality diesel
> >generator, which only meets spec if powered by audiophile-quality diesel
> >fuel (can't use a natural-gas generator--can't trust the gas company to
> >deliver audiophile-quality gas).
>
> A diesel engine will run on practically any kind of oil, so why not
> grow some oil plants on your farm and have a full control how the oil
> is produced.

Because that way I can't make $498 a gallon selling it to audiophiles,
silly.

--
--
--John
Reply to jclarke at ae tee tee global dot net
(used to be jclarke at eye bee em dot net)

809. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 18:46:04 UTC
From: C.D.H.Williams@exeter.ac.uk
Message-ID: <C.D.H.Williams-3001031846040001@cw-mac.ex.ac.uk>
Source record: 38110
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In article <b1bi890301p@drn.newsguy.com>, Winfield Hill
<whill@picovolt.com> wrote:

> fred bartoli wrote...
> >
> > An even more common 5.6V zener and a resistor will do the trick
> > with less dispersion on the current limit.
> >
> > 9V
> > +
> > 1/4 LM324 |
> > 1/2 LM358 |\|
> > o------+--------------|+\
> > IN | | >----,
> > .-. +-----|-/ |
> > | | | |/| |
> > 390R| | | | |
> > '-' | === |
> > | | GND |
> > | | |
> > | +----->Z------+
> > | | 5.6V zen |
> > | | | |
> > | | | | select for 3V drop
> > | | |_| (with meter) at 0.5mA
> > .-. | .-. |
> > Span +-->| | +-----( )---'
> > Trim 500R| | | .-. - '-' +
> > | '-' | | Meter
> > | | 180R| |
> > +----+ '+'
> > | |
> > === ===
> > GND GND
>
> Yes, Fred, very good. I like that one even more.

I'd prefer something that didn't depend on wiper resistance. Perhaps flip
the positions of the 500R and the 390R (and tweak the values as required)
and have the wiper going to the + input of the op-amp.

Charles

810. Re: 'Inverse shunt' required...

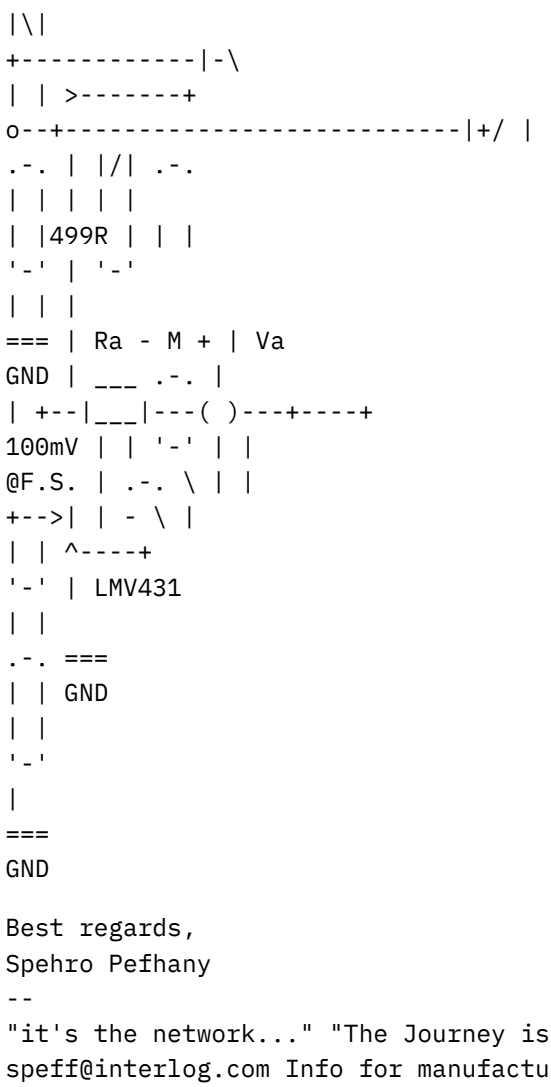
Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 19:48:35 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <88ti3v0740e1vc35mgip9la7o651o2ck48@4ax.com>
Source record: 38113
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Thu, 30 Jan 2003 18:46:04 +0000, the renowned
C.D.H.Williams@exeter.ac.uk (Charles DH Williams) wrote:

>>
>I'd prefer something that didn't depend on wiper resistance. Perhaps flip
>the positions of the 500R and the 390R (and tweak the values as required)
>and have the wiper going to the + input of the op-amp.

Sure. It's ok as-is for the purpose, but that's an improvement.

This clamp circuit might be a bit (again unnecessarily) better, and
will work to a low voltage if it was desired to make it run from a
couple of AA cells (with a suitable op-amp, of course).



Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com

Embedded software/hardware/analog Info for designers: http://www.speff.com

811. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 21:18:09 UTC
From: Jay <jay@hotmail.com>
Message-ID: <IEg_9.63265$GX4.2592508@news2.east.cox.net>
Source record: 38114
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Murray is such a asshole. He thinks he rules the newsgroup and in reality he is just another turd in the dustbowl of Texas.

"Smokey" <smokey@truck.stop> wrote in message news:3e3b26e8.79491893@news.easynews.com...
> On Thu, 30 Jan 2003 06:52:33 -0600, Murray Neece <radioranch@qth.com>
> wrote:
>
> >That YOU IDIOTS would carry this conversation on these groups indicates your disdain
> >for any rules of decency on the groups...You and Scott should get on a chat group
> >for socially un acceptable computer geeks and leave the radio groups alone. AMERICA
> >unite and blast these guys at thier home email sites...PLEASE!!
> >
>
> Why is this such a problem for you? If you don't like the
> subject, don't read it. No one is forcing you to read anything on
> Usenet If anyone needs to be blasted, its you. Please don't post
> messages with your VCF attachment, this is not a binaries news group.
> By the way, you started this off topic thread. Your such an IDIOT
> that you would carry on this conversation on these groups indicates
> your disdain for any rules of decency on the groups.
>

812. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 21:24:41 UTC
From: Chuck Chunder <See.Message.Text@ToReply.com>
Message-ID: <3e39a60b$0$7814$afc38c87@news.optusnet.com.au>
Source record: 38121

"Francois" wrote in message
> I'm wondering if I can use an oscilloscope as a frequency counter. > If I can, how does it compare, when it come to precision, to a
> frequency counter?

Hi Francois,

If you are careful, you can measure frequency with a CRO
to maybe 2% best accuracy, but it's like using a srewdriver
to drive a nail.

Always try to use the right tool for right job.

Chuck

813. oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 21:30:32 UTC
From: Francois <fproulx@NOSPAMvideotron.ca>
Message-ID: <KQg_9.9142$F75.44990@wagner.videotron.net>
Source record: 38115

Hi

I'm wondering if I can use an oscilloscope as a frequency counter. If I can, how does it compare, when it come to precision, to a freuency counter?

Since I never used neither of these instruments, maybe my question dosen't make sense to the more experimented.

Thanks for any input

Francois
VE2TTA

814. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 21:47:55 UTC
From: jgboyles@aol.com
Message-ID: <20030130164755.06392.00000385@mb-fh.aol.com>
Source record: 38116

>I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
>how does it compare, when it come to precision, to a freuency counter

That's one of the basic uses of an oscilloscope, determining the frequency of a periodic waveform. Use the scope to determine the time for one period of the waveform, take the reciprocal and you have its frequency. As for precision, a scope can't compare to a crystal timebase frequency counter with a digital readout. Most of the time a scope determined frequency is close enough for me, just depends on your accuracy requirements.
73 Gary N4AST

815. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 21:59:33 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <9fh_9.8264$Tu2.25996@news-server.bigpond.net.au>
Source record: 38117
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Vito wrote:
> Ahhh, something on topic: digital communications!
>

ROFLOL :)

Nice one - Steve

> Scott wrote:
>>
>> For someone who thinks his poop smells like roses...
>>
>> *******
>> * *
>> * *
>> *********
>> * *
>> * *
>> * *
>> ******* *******
>> * * * *
>> * * * ******
>> * * * * *
>> ****** * * * * *
>> * * * * * * * *
>> * * * *
>> * * *
>> * *
>> * *
>> * *
>> * *
>> * *
>>
>> From the USENET newsgroups that you pissed on.

816. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 22:06:43 UTC
From: D R <news@davidrossconsultant.com>
Message-ID: <Tlh_9.2501$qq2.236454@twister.southeast.rr.com>
Source record: 38118
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

>>>Hmm. I sense a new market or three here. That cord doesn't do you any
>>>good without audiophile wiring going all the way back to the power
>>>plant. And it needs an audiophile-quality generator powered by an
>>>audiophile-quality dam or steam engine or nuclear reactor. Since it is
>>>unlikely that the power companies will install such equipment just to
>>>cater to the relatively small market of superior individuals who can
>>>understand the need for such things, then it becomes necessary to take
>>>the power issue directly in hand with an audiophile-quality diesel
>>>generator, which only meets spec if powered by audiophile-quality diesel
>>>fuel (can't use a natural-gas generator--can't trust the gas company to
>>>deliver audiophile-quality gas).
>>
>>A diesel engine will run on practically any kind of oil, so why not
>>grow some oil plants on your farm and have a full control how the oil
>>is produced.
>
>
> Because that way I can't make $498 a gallon selling it to audiophiles,
> silly.
>
Oh, come on now. You really think that audiophiles growing their own plants
for fuel oil wouldn't jump all over specialty plant food and fertilizer?
Much easier to store, sell, and ship than fuel oil.

817. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 22:11:42 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v3j8p5o4r4b3f4@corp.supernews.com>
Source record: 38119

An oscilloscope makes a fine frequency counter, as long as you don't require a great deal of precision.

It's not unreasonable to measure frequency in an amateur shop to within a few Hz at HF using a frequency counter. So, 10 Hz at 10 MHz is around 1 part per million. Getting within one part per 10 with a scope takes a little care.

On the other hand, if the waveform is ugly, as it often is when you are in the midst of homebrewing equipment, you can often get very misleading results with a frequency counter. If the waveform is unexpectedly weird, the frequency counter can easily be off by a factor of 3 or 4. Since you can see this weirdness on the scope, you can't be mislead as easily.

..

"Francois" <fproulx@NOSPAMvideotron.ca> wrote in message news:KQg_9.9142$F75.44990@wagner.videotron.net...
> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
> how does it compare, when it come to precision, to a freuency counter?
>
> Since I never used neither of these instruments, maybe my question dosen't
> make sense to the more experimented.
>
> Thanks for any input
>
> Francois
> VE2TTA
>
>

818. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 22:23:42 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18a345cd82c3b2f398971d@192.168.42.131>
Source record: 38120

In article <KQg_9.9142$F75.44990@wagner.videotron.net>,
fproulx@NOSPAMvideotron.ca says...

> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
> how does it compare, when it come to precision, to a freuency counter?

With f = 1/t? Yes, it can be done. Won't be anywhere near as
precise as a counter, though, unless you've got one of the digitizing or
digital storage 'scopes that lets you put cursors on the wave to measure
the time between peaks.

> Since I never used neither of these instruments, maybe my question dosen't
> make sense to the more experimented.

It makes me ask why anyone would want to use a 'scope for anything
but rough frequency measurement. If you need precision, use a counter or
service monitor.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

819. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 22:26:53 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18a3468536a083a598971e@192.168.42.131>
Source record: 38122

In article <KQg_9.9142$F75.44990@wagner.videotron.net>,
fproulx@NOSPAMvideotron.ca says...

> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
> how does it compare, when it come to precision, to a freuency counter?
>
> Since I never used neither of these instruments, maybe my question dosen't
> make sense to the more experimented.

Almost forgot to add; Many 'scopes, those from Tektronix included,
have an output jack for a (somewhat) cleaned-up version of the vertical
input signal. I've tapped off this for a frequency counter before with
great success.

Another option: The Tektronix 7000 series has a frequency counter
plug-in available (the 7D15) that can read the frequency straight off the
selected vertical input with no additional cables.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

820. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 22:45:54 UTC
From: Robert Redelmeier <redelm@ev1.net.invalid>
Message-ID: <CWh_9.286$fU1.154614930@newssvr11.news.prodigy.com>
Source record: 38123
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
> Well, in a true story: Some years ago, a world famous university in
> Cambridge Mass, founded in 1630, was building a new Earth Sciences Building.
>
> Because one of the labs planned for that building was going to do
> extremely precise measurements of the Earth's magnetic field, they
> very carefully made sure all of the building fixtures, plumbing,
> electrical, hardware and so on, were made of non-ferrous metals,
> avoiding steel and iron which would interfere with their measurements.
>
> Then the exterior of the building was done with red bricks.
> (The red color in bricks is from iron oxide.)

I have alot of trouble believing this story because Iron oxide is
basically non-magnetic. They might have had enormous trouble from
any electrical system because of the radiated fields. Or maybe
even the induced current as any longish conductor rotates with the
earth through it's magnetic field.

> In a personal true story:
[snip]
> vibrations from trucks hitting potholes in the highway (we could hear
> this as well, from 300 yards and through two glass walls). I ended up
> adding a secondary platform suspended on a rubber which absorbed the
> low frequency vibrations. This combination finally solved the problem,
> and the device was able to produce measurements within its specs.

This I find completely credible.

-- Robert

821. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 23:13:09 UTC
From: NoBodyInParticular <goofy@goofball.net>
Message-ID: <3E39B17D.1060107@goofball.net>
Source record: 38124
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Robert Redelmeier wrote:
> In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
>
>>Well, in a true story: Some years ago, a world famous university in
>>Cambridge Mass, founded in 1630, was building a new Earth Sciences Building.
>>
>>Because one of the labs planned for that building was going to do
>>extremely precise measurements of the Earth's magnetic field, they
>>very carefully made sure all of the building fixtures, plumbing,
>>electrical, hardware and so on, were made of non-ferrous metals,
>>avoiding steel and iron which would interfere with their measurements.
>>
>>Then the exterior of the building was done with red bricks.
>>(The red color in bricks is from iron oxide.)
>
>
> I have alot of trouble believing this story because Iron oxide is
> basically non-magnetic. They might have had enormous trouble from
> any electrical system because of the radiated fields. Or maybe
> even the induced current as any longish conductor rotates with the
> earth through it's magnetic field.

You know what that brown stuff stuck to the transparent
mylar tape in cassettes is? Iron oxide.

>
>
>>In a personal true story:
>
> [snip]
>
>>vibrations from trucks hitting potholes in the highway (we could hear
>>this as well, from 300 yards and through two glass walls). I ended up
>>adding a secondary platform suspended on a rubber which absorbed the
>>low frequency vibrations. This combination finally solved the problem,
>>and the device was able to produce measurements within its specs.
>
>
> This I find completely credible.
>
> -- Robert
>

822. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-30 23:53:08 UTC
From: Idontwantspam@net
Message-ID: <3e39ba57.6288452@news.bellatlantic.net>
Source record: 38125
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Thu, 30 Jan 2003 22:45:54 GMT, Robert Redelmeier
<redelm@ev1.net.invalid> wrote:

>In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
>> Well, in a true story: Some years ago, a world famous university in
>> Cambridge Mass, founded in 1630, was building a new Earth Sciences Building.
>>
>> Because one of the labs planned for that building was going to do
>> extremely precise measurements of the Earth's magnetic field, they
>> very carefully made sure all of the building fixtures, plumbing,
>> electrical, hardware and so on, were made of non-ferrous metals,
>> avoiding steel and iron which would interfere with their measurements.
>>
>> Then the exterior of the building was done with red bricks.
>> (The red color in bricks is from iron oxide.)
>
>I have alot of trouble believing this story because Iron oxide is
>basically non-magnetic. They might have had enormous trouble from
>any electrical system because of the radiated fields. Or maybe
>even the induced current as any longish conductor rotates with the
>earth through it's magnetic field.
>
Well, the story was from my father, who got a PhD in Physics from that
University. He was a stickler for getting the scientific details
right.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

823. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 00:02:08 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <42j_9.515826$F2h1.297276@news01.bloor.is.net.cable.rogers.com>
Source record: 38126
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Gary S. wrote:

> There was too much vibration, not only in the building,
> but from the highway outside. The higher frequency vibrations from the
> building were dealt with by putting the profilometer on a heavy marble
> table, but we were still getting problems with low frequency
> vibrations from trucks hitting potholes in the highway (we could hear
> this as well, from 300 yards and through two glass walls). I ended up
> adding a secondary platform suspended on a rubber which absorbed the
> low frequency vibrations. This combination finally solved the problem,
> and the device was able to produce measurements within its specs.

I wonder if I could get something like that, to block the noise from my upstairs neighbours? ;-)

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with james.knott.

824. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 00:03:56 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <M3j_9.515833$F2h1.401353@news01.bloor.is.net.cable.rogers.com>
Source record: 38127
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Robert Redelmeier wrote:

> I have alot of trouble believing this story because Iron oxide is
> basically non-magnetic.

What do you think the first magnetic recording tapes used????? Iron oxide is magnetic. That's why it was the principal coating used in magnetic tapes, drums and disks for many years.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with james.knott.

825. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 00:06:00 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <I5j_9.515839$F2h1.406348@news01.bloor.is.net.cable.rogers.com>
Source record: 38128
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Paul Keinanen wrote:

> A diesel engine will run on practically any kind of oil, so why not
> grow some oil plants on your farm and have a full control how the oil
> is produced.
>

Well, I figure that with all the bull shit those guys spread, there's got to
be a lot of methane they could burn. ;-)

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

826. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 00:06:33 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <d6j_9.515842$F2h1.56547@news01.bloor.is.net.cable.rogers.com>
Source record: 38129
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

D R wrote:

> Oh, come on now. You really think that audiophiles growing their own
> plants for fuel oil wouldn't jump all over specialty plant food and
> fertilizer? Much easier to store, sell, and ship than fuel oil.
>

They wouldn't have to buy any manure. ;-)

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

827. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 01:02:32 UTC
From: la8ak.xnd@online.no
Message-ID: <3e39caeb.281430463@news.online.no>
Source record: 38130
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

suppose the newsgroup is not intended for kids?

On Thu, 30 Jan 2003 21:18:09 GMT, "Jay" <jay@hotmail.com> wrote:

>... is such a asshole. He thinks...
--
remove ,xnd to reply

828. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 01:34:14 UTC
From: Robert Redelmeier <redelm@ev1.net.invalid>
Message-ID: <qok_9.30$5F5.22560936@newssvr11.news.prodigy.com>
Source record: 38131
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
> Well, the story was from my father, who got a PhD in Physics from that
> University. He was a stickler for getting the scientific details
> right.

Good. Perhaps you can ask him what precautions were taken against
the magnetic fields emitted by all poewr cabling. It would be rather
tough to shield against without ferritic Faraday cages.

-- Robert

829. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 01:44:05 UTC
From: Idontwantspam@net
Message-ID: <3e39d4b3.13036425@news.bellatlantic.net>
Source record: 38132
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Fri, 31 Jan 2003 01:34:14 GMT, Robert Redelmeier
<redelm@ev1.net.invalid> wrote:

>In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
>> Well, the story was from my father, who got a PhD in Physics from that
>> University. He was a stickler for getting the scientific details
>> right.
>
>Good. Perhaps you can ask him what precautions were taken against
>the magnetic fields emitted by all poewr cabling. It would be rather
>tough to shield against without ferritic Faraday cages.
>
Unfortunately, no longer an option. Wish I could.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

830. Thanks a lot

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 01:51:13 UTC
From: Francois <fproulx@NOSPAMvideotron.ca>
Message-ID: <6Fk_9.10786$F75.96927@wagner.videotron.net>
Source record: 38133

Very helpfull information

Francois
VE2TTA

831. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 02:52:44 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <v3jp6rl4pge030@corp.supernews.com>
Source record: 38134
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

> In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
> > Well, the story was from my father, who got a PhD in Physics from that
> > University. He was a stickler for getting the scientific details
> > right.

"Robert Redelmeier" wrote ...
> Good. Perhaps you can ask him what precautions were taken against
> the magnetic fields emitted by all poewr cabling. It would be rather
> tough to shield against without ferritic Faraday cages.

Power wiring is inherently balanced as current flowing out to the load on the black wire (blue in Europe) flows back to ground on the white wire (brown in Europe).

I hold a patent for a chip probe-card that allows one to measure femto-Amps. When we measure stuff that low, room light, or even someone walking by 5 ft away would completely swamp the measurement. Bigtime Farady and light shielding. But never any particular problem from power mains wiring.

832. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 03:11:13 UTC
From: Jay <jay@hotmail.com>
Message-ID: <IPI_9.65618$GX4.2718619@news2.east.cox.net>
Source record: 38135
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

suppose you are the newsgroup cop? Take of your own kids don't worry about
others as it is none of you damned business.

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e39caeb.281430463@news.online.no...
> suppose the newsgroup is not intended for kids?
>
> On Thu, 30 Jan 2003 21:18:09 GMT, "Jay" <jay@hotmail.com> wrote:
>
> >... is such a asshole. He thinks...
> --
> remove ,xnd to reply

833. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 03:12:57 UTC
From: Jay <jay@hotmail.com>
Message-ID: <ZQI_9.65640$GX4.2720093@news2.east.cox.net>
Source record: 38136
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Good one. I understand Murray likes to sit on digital communications.

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:9fh_9.8264$Tu2.25996@news-server.bigpond.net.au...
>
>
> Vito wrote:
> > Ahhh, something on topic: digital communications!
> >
>
> ROFLOL :)
>
> Nice one - Steve
>
>
> > Scott wrote:
> >>
> >> For someone who thinks his poop smells like roses...
> >>
> >> *******
> >> * *
> >> * *
> >> *********
> >> * *
> >> * *
> >> * *
> >> ******* *******
> >> * * * *
> >> * * * ******
> >> * * * * *
> >> ****** * * * * *
> >> * * * * * * *
> >> * * * *
> >> * * *
> >> * *
> >> * *
> >> * *
> >> * *
> >> * *
> >>
> >> From the USENET newsgroups that you pissed on.
>
>

834. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 03:28:48 UTC
From: Robert Redelmeier <redelm@ev1.net.invalid>
Message-ID: <Q3m_9.22$mF.24149508@newssvr12.news.prodigy.com>
Source record: 38137
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In comp.dcom.cabling Richard Crowley <rcrowley7@xprt.net> wrote:
> Power wiring is inherently balanced as current flowing out to the load on
> the black wire (blue in Europe) flows back to ground on the white wire
> (brown in Europe).

Agreed. But there is 1-5mm separation between the conductors which
are almost always parallel and not even twisted. There will be
residual uncancelled fields except perpendicular. Perhaps only 0.33%
uncancelled at 10ft, but thats still alot from a wire carrying 5
Amps. Less in Europe because the Amps are lower for the same Watts.

> I hold a patent for a chip probe-card that allows one to measure femto-Amps.
> When we measure stuff that low, room light, or even someone walking by 5 ft
> away would completely swamp the measurement. Bigtime Farady and light
> shielding. But never any particular problem from power mains wiring.

You might have missed the mains if you were doing DC measurement!
You eqpt might have just averaged the 50 or 60 Hz, and most loads
draw equally + and - parts of the curve.

-- Robert

835. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:00:51 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3E39F4F3.6BB23AEB@clifto.com>
Source record: 38139

Bruce Lane wrote:
> Almost forgot to mention some to avoid. Stay away from the
> following:
>
> Dumont
> Most of HP's stuff (depends on the unit -- some of their scopes
> were pretty good, though not the equal of a good Tektronix).
> B&K

Why B&K? I used a 5 MHz job in a TV shop years back, and it was as good
as any other 5 MHz unit. I also borrowed a 100 MHz unit from a friend
and did NOT want to give it back, but he refused to sell it. That one
was a nice scope, with much nicer triggering than any Tek I've used.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

836. Re: good starter scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:02:30 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3E39F556.1B108AF7@clifto.com>
Source record: 38138

AC6V wrote:
> Any of the Heathkit O'scopes will do depending on the frequency you want to
> measure. See E-bay.

Ewww. My bro-in-law asked me to try to fix his expensive Heath scope. It
drifted so badly you could not adjust the DC balance. Triggering was
bad enough that it might as well have been a recurrent-sweep unit.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

837. Re: TA7611 data sheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:05:21 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3E39F601.7FD849BC@clifto.com>
Source record: 38140

Mike W wrote:
> can anyone help with a TA7611 data sheet?
> searched using Google and came up with nowt.
> cheers, Mike

<http://www.nteinc.com/specs/1400to1499/pdf/nte1413.pdf> might help you.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

838. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:29:54 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E39FBC1.7050009@ay.com.au>
Source record: 38141

Paul Burridge wrote:

> Some chap also stated a while back on this group that those
> nice-looking, beefy transformers are actually no good for use beyond
> 20 minutes at a time as the primary windings have too few turns. Seems
> a shame. :-(

Remind me not to try cooking a roast in a microwave :-)

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (2% of Full)

839. Re: Wobbulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:30:58 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E39FC02.8020705@ay.com.au>
Source record: 38142

That's a pretty neat little unit, I've gotta build myself one.

James wrote:
> Hi Glynn,
>
> You can email me directly at:
>
> James_Fenech @ telstra.com.au.
>
> Sorry the shematic isn't too readable, it was only put on the net on request
> of someone on the newsgroup. Someone in the UK was intouch with me a while
> ago and was trying to clean up the circuit, but I haven't heard from them
> for a while.
>
> Basically, the timing components aren't critical. Using the smallest
> resistor allowed by your flavour 4046 (I used the 74HC4046), and a large pot
> will allow for the greatest range available.
>
> I'll try to dig up some component values.
>
> James.
>
> "Glynn Furr" <GFURR1@nc.rr.com> wrote in message
> news:p9DY9.104099$eB1.4026292@twister.southeast.rr.com...
>
>>I need to get in touch with James Fenech or anyone who has built his
>>"Wobbulator" as described at
>>http://www.users.bigpond.com/James_Fenech/wobulator/wobbulat.htm. The
>>problem I have is that I am unable to read or make out the resistor or
>>capacitor values he has drawn around the 4046. Possibly if someone has a
>>clearer jpg of the schematic or a parts list they could help me out.
>>
>>Thanks in advance for all help,
>>
>>Glynn also k4rki@arrl.net
>>
>>
>
>
>

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (2% of Full)

840. crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:33:21 UTC
From: Doug <dougmelissa@tm.net>
Message-ID: <l0n_9.49$Bd.77621@newshog.newsread.com>
Source record: 38143

A design for a crystal set calls for a 2000 ohm speaker
and says a smaller, 8 ohm type will not work.
The one for my walkman measures 26 ohms, the small
speaker from radio shack measures 8 ohm - measured
with ohmmeter (is that correct method?).

Can someone explain why a set would work with a
large but not small impedance speaker?

Finally, where can I obtain a 2000 ohm speaker?

Thanks,
Doug

841. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:36:53 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E39FDD4.1D993D48@cox.net>
Source record: 38145

I do this all the time to make sure a VFO is in the right ball part. By measuring the trace on my 485 scope, I can get the frequency to about 5%. At 40m, that is 200 to 300 KHz off.

- Dan, N7VE

Francois wrote:
>
> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
> how does it compare, when it come to precision, to a freuency counter?
>
> Since I never used neither of these instruments, maybe my question dosen't
> make sense to the more experimented.
>
> Thanks for any input
>
> Francois
> VE2TTA

842. SP 600 transformer needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 04:37:07 UTC
From: Jeff Lynch <wa1vqy@cox.net>
Message-ID: <T3n_9.66645$GX4.2774722@news2.east.cox.net>
Source record: 38144

Hi All, I need a power transformer for a Hammarlund SP 600. Cash or trade.
Thanks & 73 de Jeff WA1VQY@COX.NET

843. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 06:34:39 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E3B6B0C.3ECA61AD@rica.net>
Source record: 38146

Doug wrote:
>
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?

It means that the audio energy source in the crystal set can put out only a half milliamp for every volt of output. (and it puts out only a tiny fraction of a volt) An 8 ohm speaker needs 125 milliamps per volt. You can put a 2000 to 8 ohm transformer upstream of your 8 ohm speaker and approximate the 2000 ohm speaker.

--
John Popelish

844. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 07:00:12 UTC
From: "J. Clarke" <nospam1@nospam.invalid>
Message-ID: <b1d6u60hku@enews3.newsguy.com>
Source record: 38047
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <3E39B17D.1060107@goofball.net>, goofy@goofball.net says...
>
>
> Robert Redelmeier wrote:
> > In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
> >
> >>Well, in a true story: Some years ago, a world famous university in
> >>Cambridge Mass, founded in 1630, was building a new Earth Sciences Building.
> >>
> >>Because one of the labs planned for that building was going to do
> >>extremely precise measurements of the Earth's magnetic field, they
> >>very carefully made sure all of the building fixtures, plumbing,
> >>electrical, hardware and so on, were made of non-ferrous metals,
> >>avoiding steel and iron which would interfere with their measurements.
> >>
> >>Then the exterior of the building was done with red bricks.
> >>(The red color in bricks is from iron oxide.)
> >
> >
> > I have alot of trouble believing this story because Iron oxide is
> > basically non-magnetic. They might have had enormous trouble from
> > any electrical system because of the radiated fields. Or maybe
> > even the induced current as any longish conductor rotates with the
> > earth through it's magnetic field.
>
> You know what that brown stuff stuck to the transparent
> mylar tape in cassettes is? Iron oxide.

Just a comment but iron has several oxides, not all of which are
magnetic.
>
>
> >
> >
> >>In a personal true story:
> >
> > [snip]
> >
> >>vibrations from trucks hitting potholes in the highway (we could hear
> >>this as well, from 300 yards and through two glass walls). I ended up
> >>adding a secondary platform suspended on a rubber which absorbed the
> >>low frequency vibrations. This combination finally solved the problem,
> >>and the device was able to produce measurements within its specs.

> >
> >
> > This I find completely credible.
> >
> > -- Robert
> >
>
>

--
--
--John
Reply to jclarke at ae tee tee global dot net
(used to be jclarke at eye bee em dot net)

845. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 07:07:12 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <m28k3v8j9snenu037tijh8bb5h98kh7e6q@4ax.com>
Source record: 38049
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Thu, 30 Jan 2003 19:48:35 GMT, Spehro Pefhany <speff@interlog.com>
opined thusly:

Could I use a LM301AN instead of the quad version? Using just one
quarter of a chip seems a bit of a waste to me...

>On Thu, 30 Jan 2003 18:46:04 +0000, the renowned
>C.D.H.Williams@exeter.ac.uk (Charles DH Williams) wrote:
>
>>>
>>I'd prefer something that didn't depend on wiper resistance. Perhaps flip
>>the positions of the 500R and the 390R (and tweak the values as required)
>>and have the wiper going to the + input of the op-amp.
>
>Sure. It's ok as-is for the purpose, but that's an improvement.
>
>This clamp circuit might be a bit (again unnecessarily) better, and
>will work to a low voltage if it was desired to make it run from a
>couple of AA cells (with a suitable op-amp, of course).
--

"What is now proved was once only imagin'd"
- William Blake, 1793

846. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 07:22:25 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <bf8k3vk0n2anp01phoupll8p8vcpeeghmp@4ax.com>
Source record: 38050

On Fri, 31 Jan 2003 04:33:21 GMT, "Doug" <dougmelissa@tm.net> opined
thusly:

>A design for a crystal set calls for a 2000 ohm speaker
>and says a smaller, 8 ohm type will not work.
>The one for my walkman measures 26 ohms, the small
>speaker from radio shack measures 8 ohm - measured
>with ohmmeter (is that correct method?).
>
>Can someone explain why a set would work with a
>large but not small impedance speaker?

The characteristic of a xtal set is that it's output voltage is very
'fragile' (or high impedance as we say). Directly you hook up anything
low impedance such as a 8 ohm speaker to it, it will overload the
set's capacity to provide any useful output power and you'll end up
with zero output. OTOH, if you use a 2000 ohm speaker as a load, which
is much higher resistance, you preserve that delicate output voltage
from the set and you should be able to get some modest volume out of
it. Crystal styluses on old record turntables are the same. They
produce a very impressive 1v output - until you try to draw any power
out of it, that is.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

847. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 07:23:53 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <529k3v8pj3kpn61j1brrv41ldfggl2nq8l@4ax.com>
Source record: 38051

On Fri, 31 Jan 2003 04:33:21 GMT, "Doug" <dougmelissa@tm.net> opined
thusly:

>A design for a crystal set calls for a 2000 ohm speaker
>and says a smaller, 8 ohm type will not work.
>The one for my walkman measures 26 ohms, the small
>speaker from radio shack measures 8 ohm - measured
>with ohmmeter (is that correct method?).
>
>Can someone explain why a set would work with a
>large but not small impedance speaker?

The characteristic of a xtal set is that it's output voltage is very
'fragile' (or high impedance as we say). Directly you hook up anything
low impedance such as a 8 ohm speaker to it, it will overload the
set's capacity to provide any useful output power and you'll end up
with zero output. OTOH, if you use a 2000 ohm speaker as a load, which
is much higher resistance, you preserve that delicate output voltage
from the set and you should be able to get some modest volume out of
it. Crystal styluses on old record turntables are the same. They
produce a very impressive 1v output - until you try to draw any power
out of it, that is.

You would also be better off going for hi-impedance headphones rather
than a speaker- they're easier to find, too.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

848. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 11:43:18 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <qjt_9.520632$F2h1.234107@news01.bloor.is.net.cable.rogers.com>
Source record: 38048
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Robert Redelmeier wrote:

> In comp.dcom.cabling Richard Crowley <rcrowley7@xprt.net> wrote:
>> Power wiring is inherently balanced as current flowing out to the load on
>> the black wire (blue in Europe) flows back to ground on the white wire
>> (brown in Europe).
>
> Agreed. But there is 1-5mm separation between the conductors which
> are almost always parallel and not even twisted. There will be
> residual uncancelled fields except perpendicular. Perhaps only 0.33%
> uncancelled at 10ft, but thats still alot from a wire carrying 5
> Amps. Less in Europe because the Amps are lower for the same Watts.
>
>> I hold a patent for a chip probe-card that allows one to measure
>> femto-Amps. When we measure stuff that low, room light, or even someone
>> walking by 5 ft away would completely swamp the measurement. Bigtime
>> Farady and light shielding. But never any particular problem from power
>> mains wiring.
>
> You might have missed the mains if you were doing DC measurement!
> You eqpt might have just averaged the 50 or 60 Hz, and most loads
> draw equally + and - parts of the curve.

Twisted power cable is not hard to come by and since this lab was for
measuring (IIRC) the earths magnetic field, it would be a simple matter to
filter out the alternating field from power wiring.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

849. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 12:26:34 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E3A6B79.70605@ay.com.au>
Source record: 38052
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge wrote:
> On Thu, 30 Jan 2003 19:48:35 GMT, Spehro Pefhany <speff@interlog.com>
> opined thusly:
>
>
> Could I use a LM301AN instead of the quad version? Using just one
> quarter of a chip seems a bit of a waste to me...

IA, a 741 or a 301, or even a TL071 or any 8pin single should work fine,
the meter movement it going to be the limiting factor of its accuracy if
you use a good quality trimmer and calibrate it properly. You could
even make the op-amp out of three discrete transistors if you wanted to.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (1% of Full)

850. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 13:06:52 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <CCydnabgzffw6KejXTWcpQ@comcast.com>
Source record: 38054

The reason that you want to use a scope as a frequency counter can be quickly seen when you work with switching power supplies, opamps, regulators etc. -- often you are looking at millivolts of transients that you want to read just above the noise level. If you can identify the frequency (period) of the transient you are on your way to the filtering solution.

For looking at a nice clean sinewave the 7D15 for the Tek 7XXX is a nice device.

"Francois" <fproulx@NOSPAMvideotron.ca> wrote in message news:KQg_9.9142$F75.44990@wagner.videotron.net...
> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter. If I can,
> how does it compare, when it come to precision, to a freuency counter?
>
> Since I never used neither of these instruments, maybe my question dosen't
> make sense to the more experimented.
>
> Thanks for any input
>
> Francois
> VE2TTA
>
>

851. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 13:10:43 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <i4sk3v0no8euuos0quarhrqsrpsvget6kp@4ax.com>
Source record: 38053
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 31 Jan 2003 07:07:12 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>Could I use a LM301AN instead of the quad version? Using just one
>quarter of a chip seems a bit of a waste to me...

The input common mode voltage range of some older op-amps (designed
for bipolar power supply) did not include the supply voltages.

When running these op-amps with a unipolar supply, the input voltage
is _at_ the negative supply voltage when no current is flowing in the
shunt. If you connect the test current the wrong way, the op-amp
non-inverting input will be more negative than the negative supply,
which can cause some problems.

Op-amps such as the LM324 are designed for unipolar supply and the
input voltage range includes both the supply voltages, so it is safe
in this respect.

Paul OH3LWR

852. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 14:23:20 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <ag1l3vs8hrchhg5knfd7b56be8ap95p62a@4ax.com>
Source record: 38055
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 31 Jan 2003 07:07:12 +0000, the renowned Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Thu, 30 Jan 2003 19:48:35 GMT, Spehro Pefhany <speff@interlog.com>
>opined thusly:
>
>
>Could I use a LM301AN instead of the quad version? Using just one
>quarter of a chip seems a bit of a waste to me...

You can use half of an LM358 (a dual) but they are all about the
same price per chip. There is no *jellybean* (universally popular,
cheap and no-brainer first choice) single-supply op-amp
that I can think of- if you were using something special (for
example, so you could get more battery life with battery power),
you could look at CMOS amplifiers such as National's LMCxxx
series. I'm sure there's something nice in an SOT23-5. ;-)

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

853. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 15:14:32 UTC
From: bowman <bowman@montana.com>
Message-ID: <b1e3n4$12a830$1@ID-159066.news.dfncis.de>
Source record: 38056

Doug wrote:

> Finally, where can I obtain a 2000 ohm speaker?

It isn't the purist approach, but a FET stage would let you use commonly available walkman type 'phones. Unless you get lucky at a HamFest, the old high impedance phones are difficult to find.

854. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 15:32:20 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b1e4tl$1or84$1@hades.csu.net>
Source record: 38057
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Robert Redelmeier wrote:
[snip]

>>Then the exterior of the building was done with red bricks.
>>(The red color in bricks is from iron oxide.)

> I have alot of trouble believing this story because Iron oxide is
> basically non-magnetic.

Last time I checked, they used iron oxide for the magnetic coating on cassette tapes, VHS tapes, etc., etc., etc.

Also, if you fire the bricks to a temp above the curie point of the oxide, when it cools it can then take on the magnetic field of the North to South poles of the earth depending on the brick's orientation at the time. So you _could_ have magnetized bricks.

> [snip]

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

855. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 16:20:33 UTC
From: g0mem <mikedt-remove.spam>, trap-@vizzavi.co.uk
Message-ID: <Fnx_9.8023$xx2.5870@news-binary.blueyonder.co.uk>
Source record: 38058
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Robert Redelmeier" <redelm@ev1.net.invalid> wrote in message
news:CWh_9.286$fU1.154614930@newssvr11.news.prodigy.com...

> I have alot of trouble believing this story because Iron oxide is
> basically non-magnetic. They might have had enormous trouble from
> any electrical system because of the radiated fields. Or maybe
> even the induced current as any longish conductor rotates with the
> earth through it's magnetic field.

Iron oxide is the magnetic coating on open-reel tapes, oxide cassettes,
8-track cartridges, VHS and Beta video cassettes etc.

Mike Turner
G0MEM

856. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 16:26:27 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E3AA3B2.7090203@attbi.com>
Source record: 38059
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Lizard Blizzard wrote:
> Robert Redelmeier wrote:
> [snip]
>
>>> Then the exterior of the building was done with red bricks.
>>> (The red color in bricks is from iron oxide.)
>>
>
>> I have alot of trouble believing this story because Iron oxide is
>> basically non-magnetic.
>
>
> Last time I checked, they used iron oxide for the magnetic coating on
> cassette tapes, VHS tapes, etc., etc., etc.
>
> Also, if you fire the bricks to a temp above the curie point of the
> oxide, when it cools it can then take on the magnetic field of the North
> to South poles of the earth depending on the brick's orientation at the
> time. So you _could_ have magnetized bricks.
>

A side note to the power line stuff, I talked to a Service Enginner
for one of the
E microscope companies many years ago. We talked about power line
problems, I was
returning from a Service call on a older style X-Ray system (non HF
inverter) on 2 phase ac, where the problem was a major inbalance between
the 2 sides of the incoming line. He mentioned he had recently worked on
a problem where the neutral leg for a major run through the Microscope
area had opened up, resulting in the conduit was carrying almost 400
amps. The resultant magnetic field to caused him to almost pull his hair
out until he did a magnetic survey of the room and found this huge field
originating from the electrical run. The Maint. people were totaly
unaware that the neutral line had opened up. When they repaired the bad
neutral run, the magnetic field disappeared, and the microscope worked fine.
Bill Higdon

857. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 17:33:54 UTC
From: wiml@underhill.hhhh.org
Message-ID: <b1ec22$5ji$0@216.39.137.108>
Source record: 38060
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <3E382AF7.9020603@cox.net>,
Mark Fergerson <mfergerson1@cox.net> wrote:
>> Hmm. I sense a new market or three here. That cord doesn't do you any
>> good without audiophile wiring going all the way back to the power
>> plant. And it needs an audiophile-quality generator powered by an
>> audiophile-quality dam or steam engine or nuclear reactor. [...]
>
> No, no, no! Nothing less than good, old-fashioned,
>emotionally atisfying _coal-fired steam_ will do!

Very true! It's well known that nuclear power plants, for example,
produce too much neutron-induced phase jitter in the 60Hz power.
Coal-fired steam is far superior, to anyone with a discerning ear.
Hydro power is tolerable, but it definitely has reduced mid-range brisance.
(It's important that the dam be located *east* of its reservoir
to reduce coriolis torqe effects! And the dam must be made of audiophile-
quality concrete.)

--
Wim Lewis <wiml@hhhh.org>, Seattle, WA, USA. PGP keyID 27F772C1

858. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 18:01:53 UTC
From: "J. Keith Carter" <j.keith.carter@sympatico.ca>
Message-ID: <3E3ABA11.5096CE18@sympatico.ca>
Source record: 38061

Doug; I cry every time I think of the old high impedance speakers I trashed as a kid just to get the horse shoe magnet. If you really want a 2000 ohm speaker, head for an antique dealer and start looking. Take your ohmmeter with you as the DC resistance will be about the same. The Horn speaker was and still is just a single high impedance earphone driver unit. But as someone else stated, get a set of high impedance earphones (Brandes was one manufacturer, again usually at the antique dealer) and use these. Good luck and have fun. Keith, VE3JKC.

Doug wrote:

> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug

859. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 19:40:08 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b1eje9$1ovjh$1@hades.csu.net>
Source record: 38062
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Richard Crowley wrote:
>>In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
>>
>>>Well, the story was from my father, who got a PhD in Physics from that
>>>University. He was a stickler for getting the scientific details
>>>right.
>>
>
> "Robert Redelmeier" wrote ...
>
>>Good. Perhaps you can ask him what precautions were taken against
>>the magnetic fields emitted by all poewr cabling. It would be rather
>>tough to shield against without ferritic Faraday cages.
>
>
> Power wiring is inherently balanced as current flowing out to the load on
> the black wire (blue in Europe) flows back to ground on the white wire
> (brown in Europe).

Well, judging by the way the power cords are in the U.S., the blue wire
is neutral and the brown wire is hot. And that is counterintuitive to
me. If you don't believe that, then chop off the end PS of an IEC power
cable for a PC, and strip the wire ends and make a continuity check and
confirm what I said. Blue = neutral, brown = hot.

> I hold a patent for a chip probe-card that allows one to measure femto-Amps.
> When we measure stuff that low, room light, or even someone walking by 5 ft
> away would completely swamp the measurement. Bigtime Farady and light
> shielding. But never any particular problem from power mains wiring.

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

860. Re: 73 Mag. August 1979, need info from.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 19:59:35 UTC
From: Eskay <ve3juaNO@SPAMrac.ca>
Message-ID: <3E3AD5A7.70203@SPAMrac.ca>
Source record: 38063
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Have found the article and scanned the pages..
E-mail me if you want them..
73 de Sieb VE3JUA...

Martin wrote:
> I have what's left of a crowbar that has a note on the pcb: "73 mag
> 8/79". There is an unidentified SCR on the board and a couple of
> components missing which must have been a pot and resistor in series used to
> adjust the firing voltage on the gate.
>
> Would anyone have a copy of that issue? It probably has the circuit and
> component values in it.
>
> I'd appreciate it if you could tell me what the values of those missing
> items might be.
>
> Marty K1FHR
>
>

861. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 20:10:00 UTC
From: Mark Hales <markhals@nospamdircon.co.uk>
Message-ID: <47B_9.8$zz.4348@news.dircon.co.uk>
Source record: 38066

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:uf7i3vooo2b30193ib72gr3hd85k0bgu2p@4ax.com...
> On Thu, 30 Jan 2003 10:24:27 GMT, Alan Yates <alany@ay.com.au> opined
> thusly:
> >> Also, is the power supply components any good for making a HF linear?
I see
> >> alot of old units at the flea markets.
> >
> >Yes, but they are also a great way to kill yourself, particuarly if you
> >take out the shunts, you can pull amps off the HT into a nice plasma
flame.
>
> Some chap also stated a while back on this group that those
> nice-looking, beefy transformers are actually no good for use beyond
> 20 minutes at a time as the primary windings have too few turns. Seems
> a shame. :-(
>
But several go well in parallel in a Tesla coil primary cct. 4kV @ 500mA.
Cheers.
Mark H.

862. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 20:18:58 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b1eln3$1p2iv$1@hades.csu.net>
Source record: 38064
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

J. Clarke wrote:
> In article <3E39B17D.1060107@goofball.net>, goofy@goofball.net says...

>>Robert Redelmeier wrote:
[snip]

>>>I have alot of trouble believing this story because Iron oxide is
>>>basically non-magnetic. They might have had enormous trouble from
>>>any electrical system because of the radiated fields. Or maybe
>>>even the induced current as any longish conductor rotates with the
>>>earth through it's magnetic field.
>>
>>You know what that brown stuff stuck to the transparent
>>mylar tape in cassettes is? Iron oxide.
>
>
> Just a comment but iron has several oxides, not all of which are
> magnetic.

Well, the statement was that iron oxide is non-magnetic, which includes
all, and is not true. Also, read my .sig.

>>>[snip]

>>>-- Robert

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

863. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 20:23:54 UTC
From: Mark Hales <markhals@nospamdircon.co.uk>
Message-ID: <57B_9.9$zz.4348@news.dircon.co.uk>
Source record: 38067

"Doug" <dougmelissa@tm.net> wrote in message
news:l0n_9.49$Bd.77621@newshog.newsread.com...
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug
>
Doug.
I've built "100s" of these and on many occasions have used the telephone earpiece from old BT 706 type telephones. (Bell, type with a dial, classic 60s and 70s shape.)
I've found them to work everywhere from very faint to quite loud.
A rolled up card "megaphone" has then converted the earphone into a speaker with good results.
I've even gone as far as to make a swan necked speaker using newspaper and white glue.
A book called "The voice of the crystal" by H. Peter Friedrichs (I got mine from Lindsay publications) shows how to make high impedence headphones from guitar pickups and shoe polish tins and crystal headphones from piezo lighters.
If you need anything specific, mail me off list. I am friendly with Gerry Wells of the Vintage Wireless & TV Museum in Dulwich, London and he may have what you need.
Cheers.
Mark H.

864. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 20:44:52 UTC
From: Karl <null_dev@earthlink.net>
Message-ID: <3E3A3867.6020705@earthlink.net>
Source record: 38065

If you can't find anything elsewhere, see if your local
Radio Shack has a crystal radio kit for sale. It should come
with a high impedance earphone.

865. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 20:47:23 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b1encc$1p4ge$1@hades.csu.net>
Source record: 38068
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Bill Higdon wrote:
[snip]

> A side note to the power line stuff, I talked to a Service Enginner for
> one of the
> E microscope companies many years ago. We talked about power line
> problems, I was
> returning from a Service call on a older style X-Ray system (non HF
> inverter) on 2 phase ac, where the problem was a major inbalance between
> the 2 sides of the incoming line. He mentioned he had recently worked on
> a problem where the neutral leg for a major run through the Microscope
> area had opened up, resulting in the conduit was carrying almost 400
> amps. The resultant magnetic field to caused him to almost pull his hair
> out until he did a magnetic survey of the room and found this huge field
> originating from the electrical run. The Maint. people were totaly
> unaware that the neutral line had opened up. When they repaired the bad
> neutral run, the magnetic field disappeared, and the microscope worked
> fine.
> Bill Higdon

Scary thought. Nowadays, those big breakers in the electrical panels
have GFCI so it would seem that such an anomaly would have tripped a
decent breaker.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

866. Icom w21a for sat work

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 21:57:22 UTC
From: Russ N3TIH <redman97@frontiernet.net>
Message-ID: <v3lsa5g2cach98@corp.supernews.com>
Source record: 38069

im inthe works on configuring 2 az rotors to work as a alt az
assembly and am going to use the icom W21a ht to work mode j , 44 down
2 meter up , but #1 i cant locate a copy of the manual ,and #2
haveing problems where to incorperate the pulse timing from the rotors
to a logic board , more so what IC's to use to interpret the puls signal
to drive a set of analog meters withsome linearity !, but for now id
like to see if anyone has the icom ic-w21a manual out there , thanks

Russ
N3TIH

867. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 22:10:47 UTC
From: D R <news@davidrossconsultant.com>
Message-ID: <HvC_9.10979$hG6.349779@twister.southeast.rr.com>
Source record: 38070
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

>>Good. Perhaps you can ask him what precautions were taken against
>>the magnetic fields emitted by all poewr cabling. It would be rather
>>tough to shield against without ferritic Faraday cages.
>
>
> Power wiring is inherently balanced as current flowing out to the load on
> the black wire (blue in Europe) flows back to ground on the white wire
> (brown in Europe).

Only single phase. With 2 or 3 phase driving anything but motors it's real easy to get unbalanced. This is mostly feeder lines that cause the problems. But I've deal with 2 firms where the local 3 phase 4 or so KV feeders were unblanced enough to cause monitor vibrations at 60Hz. Power company said "Sorry, were re-routing for a while to move some cables. Should be done in 6 months or so." These were for 19" CAD stations. Ugh.

868. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 22:59:14 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0301311459.1b26ae33@posting.google.com>
Source record: 38071

"Doug" <dougmelissa@tm.net> wrote in message
news:<l0n_9.49$Bd.77621@newshog.newsread.com>...
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug

antique electronic supply carries modern 2k phones and play things of the past also carries many older types of high impedance phones. Gary at ptop may also have some hign impedance horn drivers.

look them up on a search engine, both have web pages

also unless you are trying to build a pure crystal set I would add a stage of audio amplication even with the high impedance phones.

869. Re: 73 Mag. August 1979, need info from.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 22:59:16 UTC
From: jgboyles@aol.com
Message-ID: <20030131175916.28126.00000283@mb-ml.aol.com>
Source record: 38072

> I have what's left of a crowbar that has a note on the pcb: "73 mag
>8/79". There is an unidentified SCR on the board and a couple of
>components missing which must have been a pot and resistor in series used to
>adjust the firing voltage on the gate

The SCR has no part number, but one that is capable of 25 amps anode current should work. The pot is 100 ohms, the resistor connected to the wiper of the pot is 47 ohms, and the gate of the SCR has 150 ohms tied to common.

This crowbar circuit does not blow a fuse as some simpler designs do, but relies on a current limiter downstream of the pass transistors to pick up a relay and remove voltage from the emitters of the transistors. If the current limiter is not working, I would not worry about the crowbar circuit, if it crowbars it will likely smoke something, like the transformer or the pass transistors.
73 Gary N4AST

870. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 23:24:06 UTC
From: Doug <dougmelissa@tm.net>
Message-ID: <qAD_9.85$Bd.126059@newshog.newsread.com>
Source record: 38073

Is this tantamount to the fact that the current output
of the xtal set is limited and that if R is too low the 'theoretical'
current
per ohm's law (i=V/R) exceeds the capacity of the xtal set?
If that is the case (and my guess is that I'm way off base here),
then a resistor in series with speaker should work, right.

Thanks,
Doug

>From: Paul Burridge <redscar@waitrose.notthisbit.com>
>
> The characteristic of a xtal set is that it's output voltage is very
> 'fragile' (or high impedance as we say). Directly you hook up anything
> low impedance such as a 8 ohm speaker to it, it will overload the
> set's capacity to provide any useful output power and you'll end up
> with zero output. OTOH, if you use a 2000 ohm speaker as a load, which
> is much higher resistance, you preserve that delicate output voltage
> from the set and you should be able to get some modest volume out of
> it. Crystal styluses on old record turntables are the same. They
> produce a very impressive 1v output - until you try to draw any power
> out of it, that is.

871. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-01-31 23:53:08 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <E%D_9.523517$F2h1.188032@news01.bloor.is.net.cable.rogers.com>
Source record: 38074
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

D R wrote:

> Only single phase. With 2 or 3 phase driving anything but motors it's real
> easy to get unbalanced. This is mostly feeder lines that cause the
> problems. But I've deal with 2 firms where the local 3 phase 4 or so KV
> feeders were unblanced enough to cause monitor vibrations at 60Hz.

You seem to be forgetting Kerchoffs current law. Your currents must
balance, unless you've got some leakage to ground somewhere. While your
loads and load currents may be unbalanced, the total current through the
cable should cancel out.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

872. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 00:23:44 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0301311623.2e09a9ad@posting.google.com>
Source record: 38075
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Richard Crowley" <rcrowley7@xprt.net> wrote in message
news:<v3jp6rl4pge030@corp.supernews.com>...
> > In comp.dcom.cabling Gary S. <Idontwantspam@net> wrote:
> > > Well, the story was from my father, who got a PhD in Physics from that
> > > University. He was a stickler for getting the scientific details
> > > right.
>
> "Robert Redelmeier" wrote ...
> > Good. Perhaps you can ask him what precautions were taken against
> > the magnetic fields emitted by all poewr cabling. It would be rather
> > tough to shield against without ferritic Faraday cages.
>
> Power wiring is inherently balanced as current flowing out to the load on
> the black wire (blue in Europe) flows back to ground on the white wire
> (brown in Europe).

Here in the US, typical 230V (3-wire) power wiring feeding cooking
ranges, electric dryers, air conditioners, etc. is usually NOT
balanced. If you think about the differing voltage loads present is
these appliances you'll realize why, plus understand why 3-wires are
needed rather than simply 2.

Harry C.

873. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 00:39:56 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0301311639.bc92c92@posting.google.com>
Source record: 38076
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"g0mem" <mikedt-remove.spam,trap-@vizzavi.co.uk> wrote in message
news:<Fnx_9.8023$xx2.5870@news-binary.blueyonder.co.uk>...
> "Robert Redelmeier" <redelm@ev1.net.invalid> wrote in message
> news:CWh_9.286$fU1.154614930@newssvr11.news.prodigy.com...
>
> > I have alot of trouble believing this story because Iron oxide is
> > basically non-magnetic. They might have had enormous trouble from
> > any electrical system because of the radiated fields. Or maybe
> > even the induced current as any longish conductor rotates with the
> > earth through it's magnetic field.
>
> Iron oxide is the magnetic coating on open-reel tapes, oxide cassettes,
> 8-track cartridges, VHS and Beta video cassettes etc.
>
> Mike Turner
> G0MEM

Perhaps is time for someone to observe that there are different types
of Iron Oxide, magnetic and non-magnetic. I'm not a chemist, but I
believe one is Fe2O3 and the other Fe3O4 (in minerals, Hematite and
Magnetite).

Hematite is known for its blood red color, is non-magnetic, and often
used as a pigment for coloring bricks and concrete.

Magnetite varies in color from gray to shades of red, is magnetic, and
often used in applications because of its magnetic properties.

http://mineral.galleries.com/minerals/oxides/hematite/hematite.htm
http://mineral.galleries.com/minerals/oxides/magnetit/magnetit.htm

Harry C.

874. HP 8443A interconnect cable ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 01:14:50 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v3m7sh2cf6rlf9@corp.supernews.com>
Source record: 38077

I have a contact who claims to have the HP cable that I need to interconnect
my HP 8443A to the HP 141T. I want to confirm that it's the correct cable
before I buy it. Can someone with an HP cable take a look and tell me if it
has an HP part number and if so I wonder if they could email it to me.
thanks
hank wd5jfr

875. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 02:44:52 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <EwG_9.2380$N5.1384686@nnrp1.ptd.net>
Source record: 38078

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20030129215230.29321.00000315@mb-cf.aol.com...
> Hi Group,
>
> Anyone doing anything with converting old micro-wave ovens to 2.4GHz
amplifiers
> for AO-40 Satellite work?

Microwave ovens use magnatrons ... which are essentially a cavity-based
power oscillator ...

>
> Also, is the power supply components any good for making a HF linear? I
see
> alot of old units at the flea markets.

The power supplies in microwave ovens suck ... most are unfiltered 1/2 wave
rectified
things ...

Bottom line, microwave ovens are fine for some types of cooking and heating
water
if you like tea or instant coffee, but not all that useful for ham purposes.

73,
Carl - wk3c

876. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 02:47:56 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <wzG_9.2381$N5.1385019@nnrp1.ptd.net>
Source record: 38079

"Francois" <fproulx@NOSPAMvideotron.ca> wrote in message
news:KQg_9.9142$F75.44990@wagner.videotron.net...
> Hi
>
> I'm wondering if I can use an oscilloscope as a frequency counter.

Only for very low frequencies and then only with limited accuracy.

> If I can,
> how does it compare, when it come to precision, to a freuency counter?

It sucks to be blunt ...

If you want to drive nails, use a hammer. If you want to drive screws, use
a screwdriver.

73,
Carl - wk3c

877. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 03:05:29 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <ZPG_9.237237$pDv.163995@news04.bloor.is.net.cable.rogers.com>
Source record: 38080
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Harry Conover wrote:

> Here in the US, typical 230V (3-wire) power wiring feeding cooking
> ranges, electric dryers, air conditioners, etc. is usually NOT
> balanced. If you think about the differing voltage loads present is
> these appliances you'll realize why, plus understand why 3-wires are
> needed rather than simply 2.
>

While the two hot sides may not be balanced, the total current sum for all the conductors in the cable is zero. Anything other than that indicates a severe safety problem. It the two sides are unbalanced, the difference current will be carried by the neutral conductor. If the two sides are balanced, there will be no current in the neutral.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with james.knott.

878. Re: 73 Mag. August 1979, need info from.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 05:36:53 UTC
From: Martin <marty1kay@earthlink.net>
Message-ID: <V1J_9.1534$ek4.138804@newsread2.prod.itd.earthlink.net>
Source record: 38081
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Thanks all for the information. The crowbar came out of an old 12V supply I put together many years ago and I'm planning to dust it off and use it again. Circuitry is somewhat similar to what Gary describes; but it was set up to blow a fuse.. I'm not sure why those parts were removed; I must have cannabalized the board way back.

Sieb, thanks for the offer but I now have all I need with the values in Gary's note.

Marty K1FHR

"JGBOYLES" <jgboyles@aol.com> wrote in message news:20030131175916.28126.00000283@mb-ml.aol.com...
Martin wrote:
> > I have what's left of a crowbar that has a note on the pcb: "73 mag
> >8/79". There is an unidentified SCR on the board and a couple of
> >components missing which must have been a pot and resistor in series used to
> >adjust the firing voltage on the gate

Sieb wrote:
>Have found the article and scanned the pages..
>E-mail me if you want them..
> 73 de Sieb VE3JUA...

>
> The SCR has no part number, but one that is capable of 25 amps anode current
> should work. The pot is 100 ohms, the resistor connected to the wiper of the
> pot is 47 ohms, and the gate of the SCR has 150 ohms tied to common.
>
> This crowbar circuit does not blow a fuse as some simpler designs do, but
> relies on a current limiter downstream of the pass transistors to pick up a
> relay and remove voltage from the emitters of the transistors. If the current
> limiter is not working, I would not worry about the crowbar circuit, if it
> crowbars it will likely smoke something, like the transformer or the pass
> transistors.
> 73 Gary N4AST
>

879. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 09:14:28 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <nj0n3vs159mgaq3107j316re514h90q4i6@4ax.com>
Source record: 38082

On Fri, 31 Jan 2003 04:33:21 GMT, "Doug" <dougmelissa@tm.net> wrote:

>A design for a crystal set calls for a 2000 ohm speaker
>and says a smaller, 8 ohm type will not work.
>The one for my walkman measures 26 ohms, the small
>speaker from radio shack measures 8 ohm - measured
>with ohmmeter (is that correct method?).
>
>Can someone explain why a set would work with a
>large but not small impedance speaker?

In order to transfer the maximum amount of power (P=I x V), the load impedance should be as large as the internal source resistance. If the load resistance is less than that, the source is capable of supplying slightly more current as in the optimum case, but the available voltage drops quite drastically, thus the available power (P=I x V) drops also drastically. If the load resistance is too high, the voltage will slightly increase, but the load can not use all available current, so the power into the load drops drastically.

Trying to figure out what the source impedance for a crystal set is quite hard in the general case, but using some assumptions, some ballpark numbers can be obtained. Assuming this is a medium wave crystal set (550-1600 kHz) and the antenna is 10 m or less. A crystal set usually has a single tuned LC circuit in front of the detector and the maximum capacitance of a typical variable capacitor C would be 500 pF. If we are looking at the middle of the band at 1000 kHz, the required capacitance would be about 150 pF. This would give a capacitive reactance (X = 1 / (2 x pi x f x C)) of about 1000 ohms.

It might look as if a load of about 1000 ohms would be sufficient, but since the antenna is much less than a quarter of a wavelength, it is not resonant and it behaves like a 15-30 pF capacitor in series with the signal source. At 1 MHz the 15-30 pF capacitance represents a reactance of 10000 to 5000 ohms, thus the load should be somewhere in this range.

At resonance (when the inductive reactance of the coil and the capacitive reactance are equal, but they have opposite signs) a parallel LC circuit impedance is _much_ larger than the capacitive reactance alone. Typical values are 100 times larger.

This Q value will also control the selectivity of the receiver. The bandwidth is defined by BW = f / Q, so in this case if Q = 10, the bandwidth would be 1000 kHz / 10 or 100 kHz and with Q=100, the bandwidth would be 10 kHz, which would be quite optimal for listening

to AM transmissions.

When Q is 100, the reactance at resonance must be 100 times of the capacitive reactance of its own, so the reactance would be 100000 ohms. This is also the optimum load impedance.

>Finally, where can I obtain a 2000 ohm speaker?

I guess that 2000 ohms has been simply been specified as it is the highest headphone impedance that is commonly available today. But according to the previous calculations, the load impedance should be much grater than 2000 ohms for optimum performance.

Use an audio transformer to convert the high impedance to a low value and use ordinary headphones. If you can find an old tube amplifier output transformer, it might have a 5000 ohm primary impedance for driving a 4 ohm speaker. If you connect 32 ohm headphones to the transformer secondary (originally intended for 4 ohms i.e. 8 times less) the primary side will load the crystal by 8 x 5000 ohms or 20000 ohms, which is much better.

The 20000 ohm load would load the tuned circuit so the Q will drop to 20, thus the bandwidth would be 50 kHz, which would still be usable, if there is only one strong local station at that end of the dial.

If you can find 600 ohm headphones, e.g. from an old electromechanical telephone and using the output transformer from an old tube amplifier would give a quite optimum load impedance.

Paul OH3LWR

880. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 10:00:52 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <sf3n3voim1k6potfgacukrh4siac1efqi5@4ax.com>
Source record: 38086

On Fri, 31 Jan 2003 23:24:06 GMT, "Doug" <dougmelissa@tm.net> opined thusly:

>Is this tantamount to the fact that the current output
>of the xtal set is limited and that if R is too low the 'theoretical'
>current
>per ohm's law (i=V/R) exceeds the capacity of the xtal set?
>If that is the case (and my guess is that I'm way off base here),
>then a resistor in series with speaker should work, right.

'Fraid not. Yes, you won't overload the set's output, but you won't be generating any useful sound output from it, either. Your set needs to 'see' an impedance of 2000 ohms presented to it. Your suggestion means that you present it with say an 8 ohm speaker in series with a 1992 ohm resistor (yes I know they don't make 'em but you know what I'm getting at). All well and good so far as the set is concerned. However, you're going to uselessly dissipate the vast majority of the available output power in the resistor at the ratio of 1992:8 which will still leave you with diddly-squat volume. The idea is to dissipate all the available output power into a *useful* load - and a resistor just ain't one! In the *true* spirit of vintage radio, I'm afraid there's no alternative to hi-impedance speaker/phones.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

881. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 10:21:36 UTC
From: Wim Ton <wimton@blueyonder.co.uk>
Message-ID: <C8N_9.6538$vR1.3136@news-binary.blueyonder.co.uk>
Source record: 38083

You can connect an accurate sinus generator to the X input and look at the Lissajous patterns

Wim

882. Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 11:35:39 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b1gbeb0lqa@drn.newsguy.com>
Source record: 38084
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Spef wrote...
>
> You can use half of an LM358 (a dual) but they are all about the
> same price per chip. There is no *jellybean* (universally popular,
> cheap and no-brainer first choice) single-supply op-amp
> that I can think of- ...

The LM358 you mention comes pretty close, being half of an LM324,
which surely is a jelly bean. 'Course old jellybeans can sit
there ignored as we reach for nice jelly-filled dark chocolate.

> you could look at CMOS amplifiers such as National's LMCxxx
> series. I'm sure there's something nice in an SOT23-5. ;-)

I like dual opamps. Want four? use two duals, same space.

LMC6482 is pretty cool, with rail-rail inputs and outputs.
http://www.national.com/pf/LM/LMC6482.html Free samples.
20fA input current, 20mA out, a current gain of 10^12. :>)
1.5MHz, 1 V/us and under 90 cents quantity 1k, seems a nice
jellybean candidate to me. Hmm, what about second sources?

Thanks,
- Win

883. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 14:00:22 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v3nkp0nvcmbiac@corp.supernews.com>
Source record: 38085

> A design for a crystal set calls for a 2000 ohm speaker

Use a small 8 ohm to 2000 ohm or so transformer - probably available from Radio Shack. Unless the crystal set has some sort of amplifier I expect that you will not get much volume from the speaker. The volume level is typically about right for a 2000 ohm or higher impedance headset.

Radio Shack as a couple of different battery operated, amplified mono speakers that would probably work well and give a much higher level output.

There's also an outfit on the web called Antique Electronic Supply that has some very high impedance crystal type headsets and other supplies specifically for crystal sets.

884. Alinco DJ-S11 Mic Wiring?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 15:14:19 UTC
From: Larry W <larry@scuttlebutt.org>
Message-ID: <Xns931566EE36285scuttlebutt@65.24.2.12>
Source record: 38087

I want to use my DJ-S11 for a very LOW profile link station and would like to know if anyone could help me out in regard to the proper wiring of the mic and keying circuit.

Thanks
Larry

lweaver at yahoo.com

885. Need: Low voltage sidetone oscillator schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 16:09:06 UTC
From: la8ak.xnd@online.no
Message-ID: <3e3befea.71333731@news.online.no>
Source record: 38089

To operate QRP boatanchor AM/CW transceivers (Torn.Fu.b1 and
Torn.Fu.c), I need a sidetone oscillator operated on 1.4-1.9V supply
voltage.
Have no experience with construction circuit for lower voltage than
3V, so I wonder if you should have any references I could check?

hpe bcnu

73
Jan-Martin
LA8AK
http://www.laud.no/la6nca/LA8AK/la8ak/index.htm
--
remove ,xnd to reply

886. Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 16:13:23 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0302010813.7168dd42@posting.google.com>
Source record: 38088
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate school independent study project. It will be able to handle power levels as high as 200W (thus comfortably handle the full 100W) and power levels as low as a small fraction of a watt.

As you know, SWR meters use transformers as sensors to sample the load current and voltage. Type 43 material looked like the best choice. Most of the SWR meter designs I have seen use type 43 toroids (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives this material a frequency range of 1-50MHz.

I will be placing my order on Monday, and I am leaning towards FT50-43, since that seems to be the consensus of others who have built SWRmeters.

My three questions:
1. Should I use type 43 or type 61 material?
2. What size toroid should I use?

Regarding question 1:
I was all set to order several type 43 toroidal cores from Palomar Engineers only to find that they recommend type 61 at http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html. According to the Palomar web site, transformers should use type 43 material is for .01-10 MHz but type 61 material for .2-100 MHz. Bytemark lists the wide band frequency range of type 61 material as 10 to
200 MHz

Who is right? Palomar recommends type 61 while Bytemark and the consensus of homebrewers recommend type 43. Under what circumstances is type 61 better, and under what circumstances is type 43 better?

Regarding question 2:

I estimate that in the worst case scenarios (100-200W and a short circuit or open circuit for a load), the RF transformers may be subject up to 1-2 watts. This doesn't sound like much, but my Radio Shack resistors can only handle .5 watts.

I will be using either type 43 or type 61 ferrite material. I noticed that most cores used in other SWR meter designs are size FT-50, which is .50 in. outer diameter, .28 in. inner diameter, and .188 in. thickness. Larger cores take up more space and cost more, but I believe they can also handle more power. (Correct me if I am wrong.)

Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in. thick)? Is there any reason I should use a larger core? A smaller core?

Would using a larger (or smaller) core narrow the bandwidth or make it less sensitive? Remember: I want my device to work from 1.6 MHz to 30 MHz and at power levels as low as a fraction of a watt.

Also, I have heard that Amidon has a formula for estimating the maximum power a transformer can handle without heating up excessively. Can anyone have a link to this?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

887. Re: Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 16:49:08 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <b1gtq402qtt@drn.newsguy.com>
Source record: 38090
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Winfield wrote...
>
>Spef wrote...
>>
>> You can use half of an LM358 (a dual) but they are all about the
>> same price per chip. There is no *jellybean* (universally popular,
>> cheap and no-brainer first choice) single-supply op-amp
>> that I can think of- ...
>
> The LM358 you mention comes pretty close, being half of an LM324,
> which surely is a jelly bean. 'Course old jellybeans can sit
> there ignored as we reach for nice jelly-filled dark chocolate.
>
>> you could look at CMOS amplifiers such as National's LMCxxx
>> series. I'm sure there's something nice in an SOT23-5. ;-)
>
> I like dual opamps. Want four? use two duals, same space.
>
> LMC6482 is pretty cool, with rail-rail inputs and outputs.
> http://www.national.com/pf/LM/LMC6482.html Free samples.
> 20fA input current, 20mA out, a current gain of 10^12. :>)
> 1.5MHz, 1 V/us and under 90 cents quantity 1k, seems a nice
> jellybean candidate to me. Hmm, what about second sources?

Actually, perhaps I should take the jellybean bit back. The
LMC6482, like all rail-to-rail output opamps, suffers from
high open-loop output impedance, which makes it harder to use
with capacitive loads.

For example, I'm just now analyzing a opamp-controlled current
source with a MJH11021 250V 15A PNP darlington transistor, and
the '6482 is making the circuit very hard to compensate without
completely destroying its high-frequency response. (Adding a
1k5 load to the '6482 didn't help. Using an IRF9640 p-channel
MOSFET instead of the BJT stopped the ringing, but reduced the
response by 10x, due to the FET's much higher capacitance.)

Replacing the '6482 with an LF411 (I needed input operation to
the + rail, which was why I chose the '6482 in the first place)
solved the problem, allowing response to 100kHz. This can be
attributed to the LF411's low ~ 40-ohm open-loop Zout. Most
other BJT opamps would likely also prove able to drive my big
BJT, e.g., an OP27 worked fine (after adding a 2nd supply).
But I tried a 741, just for fun, and it oscillated madly. :>)

Thanks,
- Win

888. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 17:27:55 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E3C039B.6E2ED979@mfi.net>
Source record: 38091
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

Jason Hsu wrote:
>
> I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> school independent study project. It will be able to handle power
> levels as high as 200W (thus comfortably handle the full 100W) and
> power levels as low as a small fraction of a watt.
>
> As you know, SWR meters use transformers as sensors to sample the load
> current and voltage. Type 43 material looked like the best choice.
> Most of the SWR meter designs I have seen use type 43 toroids
> (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> this material a frequency range of 1-50MHz.
>
> I will be placing my order on Monday, and I am leaning towards
> FT50-43, since that seems to be the consensus of others who have built
> SWRmeters.
>
> My three questions:
> 1. Should I use type 43 or type 61 material?
> 2. What size toroid should I use?
>
> Regarding question 1:
> I was all set to order several type 43 toroidal cores from Palomar
> Engineers only to find that they recommend type 61 at
> http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> According to the Palomar web site, transformers should use type 43
> material is for .01-10 MHz but type 61 material for .2-100 MHz.
> Bytemark lists the wide band frequency range of type 61 material as 10
> to
> 200 MHz
>
> Who is right? Palomar recommends type 61 while Bytemark and the
> consensus of homebrewers recommend type 43. Under what circumstances
> is type 61 better, and under what circumstances is type 43 better?
>
> Regarding question 2:
>
> I estimate that in the worst case scenarios (100-200W and a short
> circuit or open circuit for a load), the RF transformers may be
> subject up to 1-2 watts. This doesn't sound like much, but my Radio
> Shack resistors can only handle .5 watts.
>

> I will be using either type 43 or type 61 ferrite material. I noticed
> that most cores used in other SWR meter designs are size FT-50, which
> is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> thickness. Larger cores take up more space and cost more, but I
> believe they can also handle more power. (Correct me if I am wrong.)
> Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> thick)? Is there any reason I should use a larger core? A smaller
> core?
>
> Would using a larger (or smaller) core narrow the bandwidth or make it
> less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> MHz and at power levels as low as a fraction of a watt.
>
> Also, I have heard that Amidon has a formula for estimating the
> maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

You might find more information at http://www.amidoncorp.com/

As far as the different materials, why not try it with both types?
Then you can include the data as part of your project to show which type
is better, and why.
--

Michael A. Terrell
Central Florida

889. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 19:46:11 UTC
From: bowman <bowman@montana.com>
Message-ID: <b1h805$13cjmk$1@ID-159066.news.dfncis.de>
Source record: 38092
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:

> Is there any reason I should use a larger core? A smaller
> core?

Other than the electrical characteristics, there is the simple mechanics of getting the required number of turns on the core. A smaller unit is also easier to mount.

iirc, 43 mix is about 8 times more permeable than 61 and the formula is

turns = 1000 * sqrt(mH / A) where A is the inductance index which is proportional to the permeability for a given size.

Fewer turns, smaller size, possibly less distributed capacitance.

Then there is the junkbox factor -- the person who designed it had a bunch of T-50-43 cores at hand.

890. Re: Icom BP- battery packs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 19:54:18 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <bs8o3vo5440fel923fhoou5bjju1ee300t@4ax.com>
Source record: 38093

On Tue, 28 Jan 2003 23:00:00 GMT, David Harmon <source@netcom.com>
wrote:

>Older ICOM battery packs, e.g BP-3, BP-5 etc. These have indentations on
>the bottom that operate three micro switches in the BC-35 drop-in charger
>and tell the charger something about what kind of battery is put in.
>
>Can anyone please tell me what the code is? What pattern of indentations
>corresponds to what info about the pack?
>
>Sorry if this does not sound like homebrew, but I'm attempting to put
>together the best combination of bits that I have to make working packs,
>including combinations of cells that may not be what ICOM had envisioned.

I spent 11 years at Icom, funny how being gone for almost two years
what one forgets.

The rapid charge BP series ie: BP-5, BP-7, BP-8 all are controlled by
temperature. If you look between the cells you will see a device that
appears to be a " fuse " it is actually a thermo cutout. Once these
batteries reach a predetermined temperature the cutout opens and the
charge stops. I don't have any information as to the temperature that
cutout operates at. A flip-flop within the charger is set and it takes
physically removing the battery and reinserting it to restart the
charge cycle or a power off / on cycle will do it so.

The BC-35 has no way of measuring the battery voltage to control the
charging. .

It seems to me the most rapid charge is about 600 mA I forget what the
center switch charge rate is though. The trickle charge rate was 25
Ma. On the BP-4 battery pack you will not find a charge rate plate.
You can determine which switch is pressed as that position will not
have the hole in the plate. Icom used to have a service manual for the
BC-35, it was in the back of the M-5 service manual.When I was there I
photocopied it many times and sent it out or faxed it free of charge.
It was only about 5 to 7 pages as I remember.

The BP-3 is trickle charge only, charges at 25 mA and does not shut
off when it reaches full charge. It has no thermo cutout.

Hope some of this helps you.

Gary K8IZ

891. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 20:15:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <379o3v0l0eucms1mp03kfs6smmmj5gi44t@4ax.com>
Source record: 38094
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On 1 Feb 2003 08:13:23 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
>school independent study project. It will be able to handle power
>levels as high as 200W (thus comfortably handle the full 100W) and
>power levels as low as a small fraction of a watt.
>
>As you know, SWR meters use transformers as sensors to sample the load
>current and voltage. Type 43 material looked like the best choice.
>Most of the SWR meter designs I have seen use type 43 toroids
>(FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
>this material a frequency range of 1-50MHz.

This is an adequate short hand for the veteran, but is too vague for
your needs. You would be far more informed if you found the same spec
as a graph across frequency, especially with overlays of the spectrum
of core formulations. My Amidon references do this in spades.

>
>I will be placing my order on Monday, and I am leaning towards
>FT50-43, since that seems to be the consensus of others who have built
>SWRmeters.
>
>My three questions:
>1. Should I use type 43 or type 61 material?
>2. What size toroid should I use?

Buy $30 worth of an assortment of types (even beyond these two) and
core sizes (or binocular style). It is a cheap and vastly more
educating experience to settle down with an array of candidates and
ask them all one question, while measuring a variety of key
characteristics. Then change the something.... Run this loop a dozen
times and there will be damn few questions remaining.

>
>Regarding question 1:
>I was all set to order several type 43 toroidal cores from Palomar
>Engineers only to find that they recommend type 61 at
>http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.

Again, a short hand specification.

>According to the Palomar web site, transformers should use type 43
>material is for .01-10 MHz but type 61 material for .2-100 MHz.

>Bytemark lists the wide band frequency range of type 61 material as 10
>to
>200 MHz
>
>Who is right? Palomar recommends type 61 while Bytemark and the
>consensus of homebrewers recommend type 43. Under what circumstances
>is type 61 better, and under what circumstances is type 43 better?

A graph would make this a slam dunk. Spend some effort in finding
that.

>
>Regarding question 2:
>
>I estimate that in the worst case scenarios (100-200W and a short
>circuit or open circuit for a load), the RF transformers may be
>subject up to 1-2 watts. This doesn't sound like much, but my Radio
>Shack resistors can only handle .5 watts.

On a weight basis, how many ï¿½W resistors are needed to equal the
weight of your core? This may seem absurd, but it is a first cut
approximation considering bulk alone. The amount of sense, beyond
that, is incumbent upon how like the two are. They aren't. So I
would offer that this is a lower limit because the cores have a
uniform composition.

Again, if you go hog wild in ordering cores; you can perform your own
stress test to destruction as part of your analysis (last test
presumably, unless you want to test the efficacy of epoxied ferrite
shards).

My guess is about two Watts for the usual core applied to RG-58
current BalUns. I would suppose 5W would be destructive, but would
love to hear from your results.
>
>I will be using either type 43 or type 61 ferrite material. I noticed
>that most cores used in other SWR meter designs are size FT-50, which
>is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
>thickness. Larger cores take up more space and cost more, but I
>believe they can also handle more power. (Correct me if I am wrong.)
>Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
>thick)? Is there any reason I should use a larger core? A smaller
>core?

You don't want power in the core at all. You are probably over sizing
this. If you simply cracked open your rig and looked at its SWR
bridge, you would then see a design tolerant to the same criteria
you've put to your project - n'est pas?
>
>Would using a larger (or smaller) core narrow the bandwidth or make it
>less sensitive? Remember: I want my device to work from 1.6 MHz to 30
>MHz and at power levels as low as a fraction of a watt.

>
>Also, I have heard that Amidon has a formula for estimating the
>maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
>Jason Hsu, AG4DG
>usenet@@@@jasonhsu.com

Hi Jason,

Core size is material only for dimensional demands of the lines passing through its center. The point of most BalUn construction and bridge design is found in isolation. Large is good in that respect because it serves to separate. However, dimension, as a function of wavelength demands a conflicting requirement for shortness of lines.

As for:
>I am working on a better 1.6MHz-30MHz SWR/wattmeter
Better? What are you bringing to the table or is this a quest for enlightenment? Better is an advertising term, not an engineering specification.

73's
Richard Clark, KB7QHC

892. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 21:43:23 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b1hf1c$1pfpn$1@hades.csu.net>
Source record: 38095
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Harry Conover wrote:
[snip]

> Here in the US, typical 230V (3-wire) power wiring feeding cooking
> ranges, electric dryers, air conditioners, etc. is usually NOT
> balanced. If you think about the differing voltage loads present is
> these appliances you'll realize why, plus understand why 3-wires are
> needed rather than simply 2.

I'm not sure what you mean by balanced. With the '2-phase' 230VAC lines in the U.S., the current going out of one line is of the opposite phase of the current coming in from the other line, so the current is balanced assuming the loads are equal. And if the center tap of the transformer is really a center tap, then the voltages are equal, ignoring the voltage drops, which should be equal if the currents in both legs are equal. This is for a standard residential neighborhood where there is no 3-phase power.

> Harry C.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

893. homebrew "2 component ICOM clone cable"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 22:00:27 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <87d6mb3blw.fsf@jidanni.org>
Source record: 37999
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

http://stevenet.freehosting.net/icom/ has a "2 component Icom Clone & CI-V Cable", which is perhaps the simplest I've seen of these. I plan to connect an ICOM R2 to my computer. Questions: does one connect all the "gnd"'s and the little "brush feet" ground symbols all together? Replace the jack with a mono one--ok, I can handle that. It is a simple circut but still safe for the few things one can do with the R2? Uh oh, what about the 5 volts, wasn't that supposed to come from one of the D9 pins?

I just go into a store with drawers full of that stuff and ask the young man to solder it together for me? (Or take it home and, hark, do it myself.) Thus I will save big bucks over the Parnass-suggested http://cloningsoftware.com/addtocart.cfm?product=CT-29A&price=25& easy way out?
--
http://jidanni.org/ Taiwan(04)25854780

894. FA: Kenwood TH-F6 PC cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 22:15:16 UTC
From: Bob <PAGEUNOW@NOSPAMHOTMAIL.com>
Message-ID: <UFX_9.23248$HG.4311146@news4.srv.hcvlny.cv.net>
Source record: 38096

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3004809356&
rd=1

895. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 22:28:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1hhn7$4jr$2@knossos.btinternet.com>
Source record: 37997

> per ohm's law (i=V/R) exceeds the capacity of the xtal set?
> If that is the case (and my guess is that I'm way off base here),
> then a resistor in series with speaker should work, right.
==========

Hopelessly wrong !

Things are already more than weak enough without connecting 100K-ohm
resistors in series with 8-ohm LOUDspeakers.

896. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 22:31:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1hhskgkt1@helle.btinternet.com>
Source record: 37998

> > A design for a crystal set calls for a 2000 ohm speaker
==========

A 100K-ohm LOUDspeaker would be much better.

897. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 23:06:37 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b1hjtt$24v$1@freenet9.carleton.ca>
Source record: 38000

"Reg Edwards" (g4fgq.regp@btinternet.com) writes:
>> per ohm's law (i=V/R) exceeds the capacity of the xtal set?
>> If that is the case (and my guess is that I'm way off base here),
>> then a resistor in series with speaker should work, right.
> ============================
>
> Hopelessly wrong !
>
> Things are already more than weak enough without connecting 100K-ohm
> resistors in series with 8-ohm LOUDspeakers.
>
>
In this case it's probably worth adding that the resistor in series
with the loudspeaker will provide the high impedance load. But
the problem is that the resistor and the loudspeaker are a voltage
divider, so whatever signal is at the top of the resistor is divided
by the divider. Considering that two resistors of the same value divide
the signal by half, a 100K resistor in series with an 8 ohm speaker
would be close enough to infinite that the difference wouldn't matter.
In other words, you won't hear anything.

Michael VE2BVW

898. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-01 23:48:45 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v3on80q8a0av81@corp.supernews.com>
Source record: 38001

```
> > > A design for a crystal set calls for a 2000 ohm speaker
> ============================
>
> A 100K-ohm LOUDspeaker would be much better.
>
>
Not necessarily. The problem is that a 100K-ohm speaker will likely
require a much higher voltage (which the crystal set cannot provide)
in order to drive the speaker to same level as a 2K-ohm speaker. Too
low an impedance and the source can't provide enough current. Too high
and the source can't provide enough voltage. The maximum power
transfer to the speaker occurs when the source and load are properly
matched.
```

899. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 00:57:54 UTC
From: Bob Peticolas <bobp@bobvette.com>
Message-ID: <bgqo3vs6t1ovlqth91mbddo6n87387qvgh@4ax.com>
Source record: 38002
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Excuse me for butting in, but I have to ask a question. When I was in school, "two phase" required four (4) wires. Two for each phase. If you tried to run two phases on two wires, you would get either nothing (as one would be hitting +100 v at the same time as the other phase was hitting -100 v - sum = zero or a short circuit thus sucking your current 100% and burning out all of your wiring).

Three phase uses three wires, one for each phase (and can use a fourth if you are running what is known as "wye" instead of "delta").

"Typical 230V (3-wire)" as found in homes is single phase with two "hot wires" and a neutral. Each conductor is 110V with respect to the neutral. And yes, there can be a very large imbalance between the two hot conductors when you have a lot of 110V appliances (refrigerators, freezers, space heaters, window air conditioners, etc) on one leg and nothing but, say lighting, on the other. (And you should see the fun in a house when the neutral opens and just the two hot lines are doing the feeding. Talk about light bulbs getting extra bright!!)

Three phase delta uses three wires with one phase on each. Sometimes a center-tap is placed on one of the transformers supplying the 3-phase thus giving you a 110V to supply between ground and either of the two phases either side to the center tap (assuming 3-phase 220V). But the voltage between any two phases will be the sum of the phase you are measuring and the other phases, thus giving us various voltages from 177v to 208v etc.

Back to the point, "2-phase" is quite rare, in fact, I don't believe I've ever seen it in real life in over forty years in the business.

bob

On Sat, 01 Feb 2003 13:43:23 -0800, Lizard Blizzard <NOSPAM@rsccd.org> wrote:

>Harry Conover wrote:
>[snip]
>
>
>> Here in the US, typical 230V (3-wire) power wiring feeding cooking
>> ranges, electric dryers, air conditioners, etc. is usually NOT
>> balanced. If you think about the differing voltage loads present is
>> these appliances you'll realize why, plus understand why 3-wires are
>> needed rather than simply 2.
>

>I'm not sure what you mean by balanced. With the '2-phase' 230VAC lines
>in the U.S., the current going out of one line is of the opposite phase
>of the current coming in from the other line, so the current is balanced
>assuming the loads are equal. And if the center tap of the transformer
>is really a center tap, then the voltages are equal, ignoring the
>voltage drops, which should be equal if the currents in both legs are
>equal. This is for a standard residential neighborhood where there is
>no 3-phase power.
>
>
>> Harry C.

900. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 01:09:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3ortfkfuffr4c@corp.supernews.com>
Source record: 38003
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

With any of the ferrites of reasonable permeability, coupling isn't a problem in a transformer -- you'll get very close to a unity coefficient of coupling with any of them. So the issues are:

1. You need to have adequate winding impedance. That is, the impedance of a winding should be at least several times the impedance of the circuit it's connected across. Unless power dissipation is a problem (see #2, below), it doesn't matter what the angle of the impedance is. A resistive, as opposed to reactive, impedance is often more desirable because it stays relatively constant over a wide range of frequency.

2. Heating. The power the core dissipates due to each winding is approximately winding I^2 * R, where R is the resistive part of the winding impedance, and I is the signal current in the winding. You can keep this product in bounds by making R high. The heading will of course be less for larger cores. I've found that hysteresis or other amplitude-related loss isn't a concern for this sort of application. But you'd undoubtedly impress your professor by showing that you considered this, and the calculations you used to arrive at your conclusion.

The frequency ranges given for ferrites are often based on the frequency range over which their impedance is primarily reactive, i.e., the range over which they make decent inductors or tuned circuit elements. These aren't the criteria that are important for broad band transformers, however. The main properties you have to consider are the ones impacting the two considerations above. Ferrites like type 61 have lower R for a given impedance, but you might not be able to get enough impedance over the frequency range, especially when resonance effects are considered. Type 43, on the other hand, might have dissipation problems at 200 watts. Welcome to engineering!

A graduate student should be able to calculate the necessary value of winding impedance based on the design requirements. You can find the impedances of cores of various sizes and materials at the Fair-Rite web site. Estimation of temperature rise based on physical size and mounting is also something a grad student should be able to handle, at least approximately. (A simple lab test to show the validity of the calculations or approximations would be a plus.) If you submitted your work to me as evidence of your ability when interviewing for an engineering job, I'd put a lot of weight on how you came to make the choices you did. Perhaps your professors use different criterion for judging work, however.

Roy Lewallen, W7EL

Jason Hsu wrote:
> I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> school independent study project. It will be able to handle power
> levels as high as 200W (thus comfortably handle the full 100W) and
> power levels as low as a small fraction of a watt.
>
> As you know, SWR meters use transformers as sensors to sample the load
> current and voltage. Type 43 material looked like the best choice.
> Most of the SWR meter designs I have seen use type 43 toroids
> (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> this material a frequency range of 1-50MHz.
>
> I will be placing my order on Monday, and I am leaning towards
> FT50-43, since that seems to be the consensus of others who have built
> SWRmeters.
>
> My three questions:
> 1. Should I use type 43 or type 61 material?
> 2. What size toroid should I use?
>
> Regarding question 1:
> I was all set to order several type 43 toroidal cores from Palomar
> Engineers only to find that they recommend type 61 at
> http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> According to the Palomar web site, transformers should use type 43
> material is for .01-10 MHz but type 61 material for .2-100 MHz.
> Bytemark lists the wide band frequency range of type 61 material as 10
> to
> 200 MHz
>
> Who is right? Palomar recommends type 61 while Bytemark and the
> consensus of homebrewers recommend type 43. Under what circumstances
> is type 61 better, and under what circumstances is type 43 better?
>
> Regarding question 2:
>
> I estimate that in the worst case scenarios (100-200W and a short
> circuit or open circuit for a load), the RF transformers may be
> subject up to 1-2 watts. This doesn't sound like much, but my Radio
> Shack resistors can only handle .5 watts.
>
> I will be using either type 43 or type 61 ferrite material. I noticed
> that most cores used in other SWR meter designs are size FT-50, which
> is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> thickness. Larger cores take up more space and cost more, but I
> believe they can also handle more power. (Correct me if I am wrong.)
> Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> thick)? Is there any reason I should use a larger core? A smaller
> core?
>
> Would using a larger (or smaller) core narrow the bandwidth or make it

> less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> MHz and at power levels as low as a fraction of a watt.
>
> Also, I have heard that Amidon has a formula for estimating the
> maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

901. FS: HAM STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 01:12:35 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <7g__9.16919$rq4.1207739@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38004

Ham Stuff on eBay now includes:

RJ-1A vac relay

National Radio right angle drives

Millen GDO parts

B&W Fil choke

Amphenol chassis n connectors

10KV .05 glass? Caps

Mosley ant parts

Centralab controls

Search under seller heytubeguy

902. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 02:15:12 UTC
From: Idontwantspam@net
Message-ID: <3e3c7e46.56537807@news.bellatlantic.net>
Source record: 38005
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Sat, 01 Feb 2003 19:35:18 -0600, wdg@[206.180.145.133] wrote:

>If you ever have occasion to visit an industrial factory where 440-volt
>three phase power is in use, you may notice on a wall someplace
>conspicuous and very much in plain sight, a box with 3 light bulbs on it
>and all 3 bulbs just barely glowing a very dim orange and each with equal
>brilliance. Anyone ever seen this and wondered what it was for? Think
>before you answer. Hint: "safety"
>
You hinted at it enough.

Each bulb is wired to a different phase of the three phases. As long
as they are equal in brightness, the three phases are balanced. If
there is an imbalance, such as from a broken connection, one might be
out or one might be very bright. This would alert someone to do a
check of the wiring.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

903. Re: homebrew "2 component ICOM clone cable"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 02:19:01 UTC
From: please-nospam <nobody@home.com>
Message-ID: <pe%_9.26902$zF6.1942250@bgtnsc04-news.ops.worldnet.att.net>
Source record: 38006
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

although I don't doubt for a moment that it's possible to make up your own cable, risking damage to an expensive scanner is a danger I can do without! That's why I bought the cable for $25 + 5 shipping, and consider it worth the money! Having one has made my R3 radio so much easier to use!

Marvin, in Atlanta

904. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 02:19:24 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <Me%_9.193408$ej1.95479@news02.bloor.is.net.cable.rogers.com>
Source record: 38007
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Bob Peticolas wrote:

> Excuse me for butting in, but I have to ask a question. When I was in
> school, "two phase" required four (4) wires. Two for each phase. If
> you tried to run two phases on two wires, you would get either nothing
> (as one would be hitting +100 v at the same time as the other phase
> was hitting -100 v - sum = zero or a short circuit thus sucking your
> current 100% and burning out all of your wiring).
>

Common household power is 240V split phase, where each side is 120V to neutral. One hot side is 180 degrees out of phase from the other. If loads are equal, the current goes from one hot wire through the loads to the other, with no current in the neutral. If the loads are not equal, there will be a difference current, returned by the neutral.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with james.knott.

905. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 02:20:45 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <1g%_9.193436$ej1.127938@news02.bloor.is.net.cable.rogers.com>
Source record: 38008
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

wdg@[206.180.145.133] wrote:

> 220/230/240 volt residential service is indeed, single phase. The 3rd wire
> coming from the pole is the neutral. This is connected to the center tap
> of the transformer secondary and serves as the "return" leg for
> 110/115/120 volt common household appliances and lighting circuits.
>
>

When measured from the neutral, the 2 hot wires are 180 degrees apart.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

906. Re: how to calculate and build a yagi???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 03:06:36 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0X%_9.135582$ui1.3390911@news1.east.cox.net>
Source record: 38009
Cross-posted to: alt.ham-radio,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Yagi Optimizer by Brian Breezely.

"Brian" <houge@smart-tech.dk> wrote in message
news:3e307230$0$255$edfadb0f@dread15.news.tele.dk...
> Hello.
>
> Ive looked around on some homepages but cant find the thing i need.
>
> I need to find out how to build a yagi from the bottom.
> There are allot of good final designs out there, but they are all for
> amateur bands or WLAN,
> what i need is some way to calculate the elements,driver,reflector, so i
can
> make the yagi
> for what ever freq i want.
>
> Can someone lead me to a homepage with such calculations?
>
> Thank you.
>
>
>
> --
> 73 de OZ1SKY Brian
> ICQ# 8879610
> AOL.IM# usericq8879610
> IRC #Hamradio.oz (Undernet)
> http://oz1sky.smart-tech.dk
>
>

907. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 06:50:21 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0302012250.565ecefa@posting.google.com>
Source record: 38010
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Lizard Blizzard <NOSPAM@rsccd.org> wrote in message news:<b1hf1c$1pfpn$1@hades.csu.net>...
> Harry Conover wrote:
> [snip]
>
>
> > Here in the US, typical 230V (3-wire) power wiring feeding cooking
> > ranges, electric dryers, air conditioners, etc. is usually NOT
> > balanced. If you think about the differing voltage loads present is
> > these appliances you'll realize why, plus understand why 3-wires are
> > needed rather than simply 2.
>
> I'm not sure what you mean by balanced. With the '2-phase' 230VAC lines
> in the U.S., the current going out of one line is of the opposite phase
> of the current coming in from the other line, so the current is balanced
> assuming the loads are equal.

My point was simply that most of the common 230V appliciance used here
in the US do not impose equal loads on each phase of the circuit. The
difference current is returned by the neutal, hence the need for
3-wires.

The perfect example is an electric clothes dryer. Its heating element
is driven by 230V and and in itself imposes a perfectly balanced load
on the line. On the other hand, the electric motor that rotates the
drum in the dryer operates on 115V, draws current from only one phase
of the 230V supply, and uses the neutral for its return.

That's simply what I mean't by an unbalanced load that results in
unequal current from both phases of the supply. It's not an uncommon
situation since many air conditioners an other 230V household
appliance operate in the same way.

Of course there are exceptions. Normally electric hot water heaters
operate on 230V, and do present a balanced load. If you throw in a
115V electric motor to drive a heating schedule timer, even their load
becomes slighly unbalanced.

When the current draw from one side of line to its return is unequal,
the load is said to be unbalanced. (Not that it makes a great deal of
diffence in most cases.) The load creating the unbalance simply
employs the neutal line for its return path, hence the summation of
current flow though the feeder cable, except when a ground fault
occurs, is zero. (However, this doesn't even begin to suggest that the
EMF from the cable is zero, although that EMF is minimized if the
cable consists of a 3-wire twisted configuration, which of course is

not very common.)

Still, load balance is a only matter of serious consideration WRT the main power feed to the facility, but in the case of a private home balancing the load between the two-phase 230V supply is generally not a critical issue. On residential installation most competent electrical contractors will try to assure that the 115V circuits are equally distributed between each of the two phases of the feeder line. However, they do often forget to consider the load imbalance created by 230V appliances, as I've described above, plus they have no concept of which brances of the distribution circuits will become simultaneously heavily loaded. They simply put half of the 15 amp breakers on one phase of the line, the remainder on the other, and hope for the best!

On an industrial scale balance is serious, because a grossly unbalanced load could exceed the capacity of one-half the secondary windings on a pole mounted distribution transformer and result in its premature failure.

I am of course entirely neglecting the EMF or EMI consequence of lines driving unbalanced loads which led us down this path originally. That's simply because the venues where EMF could be of possible concern are usually fed by 115V branch circuits, which by definition are balanced (since thre is only one phase, one hot wire and one return). EMF becomes a much greater consideration in facilities which share specialized equipment driven by 230V single phase (actually bi-phase) and/or 208V through 480V 3-phase supply lines. Here the ramifications of an unbalanced load cannot be ignored.

Verbose as this post turned out to be, I hope it is helpful.

Harry C.

908. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 06:58:06 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <1cgp3vgbs3srabngrol9smohr883adqucl@4ax.com>
Source record: 38011
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Mon, 27 Jan 2003 13:43:41 -0800, Bill Turner <w7ti@dslextreme.com>
wrote:

>On 27 Jan 2003 13:16:40 -0800, cornytheclown@hotmail.com (cornytheclown)
>wrote:
>
>>http://www.warez.com/
>
>_____
>
>Fellas, take some advice learned the hard way. Don't go to any site
>which does "warez" or you may regret it. About a year ago I browsed
>over to one of them - don't remember which - and subscribed to a
>service. Ever since, the bast***s have been sending me spam of over ONE
>MEG in size every few weeks. Can not get rid of them. I only hope they
>will eventually get tired and go away.
>
Have your ISP block them for you...I think most can and will do it.
At least mine will.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>Forewarned is forearmed. :-(
>
>Bill, W7TI

909. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 09:06:38 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <b1in36tds1@news8.svr.pol.co.uk>
Source record: 38012
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

http://www.bytemark.com/products/fermgprp.htm

this site is brill for all your toroid iron and ferrite tables, lists etc,
thanks for the URL!

910. Re: Digital VFO mixer using flip-flop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 13:45:33 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <1i9%9.2696$N5.1596612@nnrp1.ptd.net>
Source record: 38013

There are at least a couple of advantages in running the VFO at a
higher frequency and dividing down:

1) the percentage bandwidth that the VFO must tune (at its fundamental)
is much smaller.
2) dividing down will reduce phase noise by the ratio of the division

Carl - wk3c

"W3JDR" <joe@roccis.com> wrote in message
news:yxFX9.3973$sp3.1465@nwrddc03.gnilink.net...
> Jan-Martin,
> If you want to experiment anyway, an exclusive-or gate makes a very
> effective frequency mixer. It behaves similar to an analog double
balanced
> mixer, but it requires (or I should say it 'works best with') with square
> wave inputs. For this reason, it can not handle input signals that have
> amplitude modulation.
>
>
> "J M Noeding" <la8ak.xnd@online.no> wrote in message
> news:3e2f19a8.76952059@news.online.no...
> > OK es tnx for reply,
> > it seems to be a bad idea, will not use it as such, but it would have
> > been interesting to know what sort of products you get from the mixer,
> > and what sort of digital mixers is easy to hook up.
> > Will se what frequency range is most suitable for making a VFO
> >
> > 73
> > Jan-Martin
> > LA8AK
> >
> > On Wed, 22 Jan 2003 09:50:01 +0200, Paul Keinanen <keinanen@sci.fi>
> > wrote:
> >
> > >On Wed, 22 Jan 2003 01:20:25 GMT, la8ak.xnd@online.no (J M Noeding)
> > >wrote:
> > >
> > >>Hi
> > >>
> > >>What I need is a local oscillator for a VLF receiver. The LO must
> > >>cover 220-300kHz, so I suppose to use a 2.4576MHz xtal and 2MHz VFO
> > >>and divide the output down to 220-300kHz.
> > >
> > >Why don't you run the VFO directly at 220-300kHz, the required

> > >capacitance range is only 1.9:1, so this could be done without band
> > >switching. A 10 ppm frequency drift would alter the Rx frequency by
> > >less than 3 Hz.
> > >
> > >The required inductances and capacitances would have to be quite large
> > >and hard to get, so indeed it would be nice to run the VFO at a higher
> > >frequency. Why not run the VFO at say, 16 times the desired LO
> > >frequency (3520 .. 4800kHz) and simply divide it by 16. The required
> > >capacitance range would be the same as in the previous case. A 10 ppm
> > >frequency drift would alter the VFO by less than 48 Hz, but the Rx
> > >frequency by less than 3 Hz.
> > >
> > >The good thing with your original approach is that the required VFO
> > >capacitance range would be quite small, but the problem with your
> > >approach is that a 10 ppm drift at 2 MHz is 20 Hz and if you mix it
> > >directly down to 220 to 300 kHz, the Rx frequency drift would be 20 Hz
> > >and if a divide by two stage is used after the mixer, the Rx drift
> > >would be 10 Hz, still clearly much worse than running the VFO at the
> > >LO frequency or simply dividing it down to the LO frequency.
> > >
> > >The down mixing approach is nice if you have to start the frequency
> > >range from (practically zero) as in audio generators with a linear
> > >frequency scale from below 20 Hz to 20 kHz in a single band (however
> > >with mediocre frequency stability).
> > >
> > >The up mixing approach is nice for generating a narrow frequency band
> > >in the HF/VHF/UHF range with the good stability of a free running MF
> > >or low band HF oscillator.
> > >
> > >However, neither of these cases match your requirement and in fact
> > >using it will just add to the drift without any benefits.
> > >
> > >Paul OH3LWR
> > >
> >
> > --
> > remove ,xnd to reply
>
>

911. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 14:15:14 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <0L9%9.1$B54.3039@newsfep1-win.server.ntli.net>
Source record: 38014

> Use a small 8 ohm to 2000 ohm or so transformer - probably available
> from Radio Shack. Unless the crystal set has some sort of amplifier I
> expect that you will not get much volume from the speaker. The volume
> level is typically about right for a 2000 ohm or higher impedance
> headset.
=======
If you really want to use a transformer with impedance ratio of 8 : (2000 or more) you can use any small transformer with a winding ratio of sqrt 8 : sqrt (2000 or more) = 1: 17 or more.

Testing ,with a low voltage power transformer 2 resistors and a DVM.
Get approx 100 - 200 mV AC 50/60 Hz from power transformer and resistive voltage divider and connect transformer under test, which can be any small transformer ,whether meant for power ,or audio. Most junk boxes have these.
Measure input of transformer under test as well as output . If voltage ratio is 1:17 or more (or 17 or more :1 depending on how you connect transformer ,the transformer when (correctly) connected to speaker or head phone and crystal set will present an acceptable load to the crystal set.

If you use low cost computer headphones with a nominal impedance of 32 Ohms , the transformer winding ratio required becomes sqrt 32 : sqrt (2000 or more) = 1 : 8 or more .
This will allow you to use a small low voltage AC. transformer of say 115 to 12 V or similar ratio. It would be even better to use the lowest available low voltage tap ,say 3 V .
In that case the voltage ratio is 3 : 115 = approx 1 : 40 hence impedance ratio would be 1: 1600. So, with 32 Ohms headphones connected the crystal set would be presented with an impedance of 32*1600 = more than 50000 Ohms.
With a crystal set producing veeeeery little power ,using headphones seems most appropriate.

Frank gm0csz.kn6wh@ntlworld.com

912. mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 14:48:18 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b1jch5smd1@nyytiset.pp.htv.fi>
Source record: 38015

Hi,

if I place a tuned tank on the output of a mixer (down conversion to
IF), will it be reflected back to RF as a tank tuned to LO+IF?

Just thinking whether or not the antenna tank could be left out... ;-)

thanks,

- Jan

913. Re: HP 8443A interconnect cable ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 15:42:44 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v3qf3p66r9b1d8@corp.supernews.com>
Source record: 38016

found it...
HP 08443-600009
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v3m7sh2cf6rlf9@corp.supernews.com...
> I have a contact who claims to have the HP cable that I need to
interconnect
> my HP 8443A to the HP 141T. I want to confirm that it's the correct cable
> before I buy it. Can someone with an HP cable take a look and tell me if
it
> has an HP part number and if so I wonder if they could email it to me.
> thanks
> hank wd5jfr
>
>

914. Re: Alinco DJ-S11 Mic Wiring?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 16:06:11 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b1k4sk$f5$1@reader11.wxs.nl>
Source record: 38022

http://www.brainbuster.fsnet.co.uk/radio/micdiags.html

915. Re: homebrew "2 component ICOM clone cable"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 16:08:10 UTC
From: Harry <hgk@centurytel.net>
Message-ID: <3E3D426A.AD7124A8@centurytel.net>
Source record: 38017
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

This page show many home made CI-V level converters, Some built with
transistors and some built with MAX-232 chips.

http://www.plicht.de/ekki/civ/civ-p2.html

please-nospam wrote:
>
> although I don't doubt for a moment that it's possible to make up your own
> cable, risking damage to an expensive scanner is a danger I can do without!
> That's why I bought the cable for $25 + 5 shipping, and consider it worth
> the money! Having one has made my R3 radio so much easier to use!
>
> Marvin, in Atlanta

916. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 16:30:32 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v3qht5mod5tb56@corp.supernews.com>
Source record: 38018
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

An "inverse shunt" would be an amplifier. You want 200uA amplified 2.8X to
560uA.
A simple and cheap alternative to adding the amplifier stage would be to use
a $10 200mV digital panel meter with a 1K resistor shunted across the
input.
Capoot
"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:uqjd3vglbof2glvhk2tbshvtr39u759snn@4ax.com...
>
>
> Hi,
>
> I need a meter that will show FSD with a current of 200uA. I *have* a
> meter that shows FSD at a current of 0.56mA. Any suggestions, anyone?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

917. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 17:29:27 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <rA2dnX2tstqZGKCjXTWcoQ@cnmnetwork.com>
Source record: 38021

I don't think so.

918. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 17:45:13 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <XM2cnbj2auJy-qCjXTWcoQ@ctc.net>
Source record: 38020
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

```
>
> >>If you ever have occasion to visit an industrial factory where 440-volt
> >>three phase power is in use, you may notice on a wall someplace
> >>conspicuous and very much in plain sight, a box with 3 light bulbs on it
> >>and all 3 bulbs just barely glowing a very dim orange and each with
equal
> >>brilliance. Anyone ever seen this and wondered what it was for? Think
> >>before you answer. Hint: "safety"
>
> >You hinted at it enough.
>
> >Each bulb is wired to a different phase of the three phases. As long
> >as they are equal in brightness, the three phases are balanced. If
> >there is an imbalance, such as from a broken connection, one might be
> >out or one might be very bright. This would alert someone to do a
> >check of the wiring.
>
> **THINK** before you answer. Look at your answer. You acknowledged the
> "safety" hint then completely jumped the track and gave an answer that
> ignored safety and focused instead on phase balance. You're right, the
> bulbs are connected to the 3 legs of the 3-phase power, but they're each
> connected from 1 leg to ground, not connected "between" the phases.
>
> From the safety viewpoint think more in terms of one phase shorting out to
> ground. Three-Phase electrical systems do not use a "ground". Therefore,
> in three phase power systems one phase becoming accidentally shorted to
> ground would not constitute a service-affecting event or even affect load
> balance, but it WOULD present a major electrocution hazard as well as a
> potential explosion hazard. With one phase shorted to ground one of the
> lamps would extinguish while the other two would glow brightly. The 3
> lamps are actually monitoring leakage current from each phase to ground.
> With one phase shorted to ground ...anywhere in the plant... suddenly the
> other two phases become *HOT* with respect to ground, *EVERYWHERE* in the
> plant.
>

I work as an electrician in a very large plant and most of our 480 Volt 3
phase3 circuits are wired in the Y configuration and we get 277 volts to
ground. If there is a short of one phase to ground there is a big bang and
a fuse or breaker goes out.
```

919. Re: 'Inverse shunt' required...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 18:21:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1jnif$f3s$1@helle.btinternet.com>
Source record: 38019
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

> > I need a meter that will show FSD with a current of 200uA. I *have* a
> > meter that shows FSD at a current of 0.56mA. Any suggestions

==========

Yes, obtain a meter which has a sensistivity of 200uA or better. Meters as sensitive as 50uA FSD are probably available. Make sure the movement is damped against oscillation.

Or invent a meter shunt which has a negative resistance and apply for a patent without delay. Somebody might beat you to it.

920. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 22:31:10 UTC
From: Lasse <no_email@today.sri>
Message-ID: <fl6r3vo2j3m09au5j7o3eve19d8quiul6l@4ax.com>
Source record: 38023

In short: NO!
It will degrade the performance of the mixer as energy will bounce
back into the mixer and cause distortion.

Use a diplexer filter to wide-band terminate the mixer to ensure no
reflected power.

You still need to have a filter at the input!

/L

On Sun, 2 Feb 2003 16:48:18 +0200, "Jan Wagner" <jwagner@cc.hut.fi>
wrote:

>Hi,
>
>if I place a tuned tank on the output of a mixer (down conversion to
>IF), will it be reflected back to RF as a tank tuned to LO+IF?
>
>Just thinking whether or not the antenna tank could be left out... ;-)
>
>thanks,
>
> - Jan
>
>
>

921. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 23:44:56 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <0c3p3vkv2pfs5pjp23mvklrlqo2ok1k3qp@4ax.com>
Source record: 38024

On Fri, 31 Jan 2003 23:24:06 GMT "Doug" <dougmelissa@tm.net> wrote:

>Is this tantamount to the fact that the current output
>of the xtal set is limited and that if R is too low the 'theoretical'
>current
>per ohm's law (i=V/R) exceeds the capacity of the xtal set?
>If that is the case (and my guess is that I'm way off base here),
>then a resistor in series with speaker should work, right.

That's a reasonable way to put it.

Adding a resistor in series would keep you from drawing too much
current from the set, but then you only get a fraction of the total
available power into the speaker; the rest is wasted in the resistor.
The goal is to get it all into the speaker.

OTOH, I have no idea where one might find a 2000 ohm speaker. 2000 ohm
headphones used to be available and this was what was commonly used in
crystal sets. Your best bet for finding such a pair today is probably
at a swap meet.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

922. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-02 23:44:56 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <cn3p3vkjmvs1abk4p3jkqk4i3mgvdqdg2m@4ax.com>
Source record: 38025
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On 1 Feb 2003 08:13:23 -0800 jason_hsu@my-deja.com (Jason Hsu) wrote:

>I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
>school independent study project. It will be able to handle power
>levels as high as 200W (thus comfortably handle the full 100W) and
>power levels as low as a small fraction of a watt.
>
>As you know, SWR meters use transformers as sensors to sample the load
>current and voltage.

If you're really interested in doing this a better way, you should study the Bird model 43 wattmeter. It uses NO ferrites and works well above a kilowatt. It uses no obvious transformer, although the transformer concept is there.

Once you understand how these work you would never again consider any kind of explicit transformer.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

923. Re: MicroWave Ovens and 2.4GHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 01:39:24 UTC
From: Ben Sheehan <bigddybn@adelphia.net>
Message-ID: <gLj%9.3736$0L3.2616841@news2.news.adelphia.net>
Source record: 38027

What about a turkey? Or perhaps a meatloaf? Not everyone likes ham. :-)

>
> Bottom line, microwave ovens are fine for some types of cooking and
heating
> water
> if you like tea or instant coffee, but not all that useful for ham
purposes.
>
> 73,
> Carl - wk3c
>

924. WTB: 300 BAUD S-100 bus modem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 01:43:26 UTC
From: Alan <adiaz224@earthlink.net>
Message-ID: <2Pj%9.4510$6P2.504268@newsread1.prod.itd.earthlink.net>
Source record: 38028
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I'm looking for any brand of S-100 bus modem, circa 1970'ish. If you have one, send me an email. Thanks. Alan

925. Re: Alinco DJ-S11 Mic Wiring?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 02:14:38 UTC
From: whagen6@cs.com
Message-ID: <20030202211438.22397.00000455@mb-ca.news.cs.com>
Source record: 38029

which one is the alinco?

926. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 03:23:21 UTC
From: Doug <dougmelissa@tm.net>
Message-ID: <Jgl%9.150$Bd.278543@newshog.newsread.com>
Source record: 38030

Thanks for all the valued responses.
You've been a great help for my understanding.
Doug

927. WTD: parts for Motorola R2001D/HS Service Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 05:09:32 UTC
From: "R. Belcher" <randy.belcher@verizon.net>
Message-ID: <gQm%9.12347$x63.9714@nwrddc01.gnilink.net>
Source record: 38031
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Ok, here's an oddball request.... I'm curious if anyone out there has a battery pack or proper plug (to make an external pak) for this service monitor and if so, what's the cost?
thanks!
Randy

928. Re: WTD: parts for Motorola R2001D/HS Service Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 05:17:40 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18a79b4f19ab8d8898972c@192.168.42.131>
Source record: 38032
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

In article <gQm%9.12347$x63.9714@nwrddc01.gnilink.net>,
randy.belcher@verizon.net says...

> Ok, here's an oddball request.... I'm curious if anyone out there has a
> battery pack or proper plug (to make an external pak) for this service
> monitor and if so, what's the cost?

Not so oddball at all. I've seen those connectors, and there's
nothing really exotic about them. Take a look at http://www.amp.com, and
look for the 'CPC' (Circular Plastic Connector) series. Bet you could
even talk them out of a sample if you just need one or two.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

929. Re: parts for Motorola R2001D/HS Service Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 14:55:48 UTC
From: "R. Belcher" <randy.belcher@verizon.net>
Message-ID: <Upv%9.2$yt6.1@nwrddc04.gnilink.net>
Source record: 38033
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Excellent, thanks for the info! Much appreciated.
rb

"R. Belcher" <randy.belcher@verizon.net> wrote in message
news:gQm%9.12347$x63.9714@nwrddc01.gnilink.net...
> Ok, here's an oddball request.... I'm curious if anyone out there has a
> battery pack or proper plug (to make an external pak) for this service
> monitor and if so, what's the cost?
> thanks!
> Randy
>
>

930. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 15:38:51 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e3daf51$0$406@echo-01.iinet.net.au>
Source record: 38026

The mixer's performance and input impedance will depend on what load it is looking into. It is best for most mixers to look into a broadband resistive load so that all the likely output products are terminated in a predictable fashion. A tuned circuit at the output will obviously be reactive at most frequencies. A broadband resistive load could be a resistive pad (easy but lossy) or a diplexer (better but harder to do). Interestingly I think there is a situation where your question does apply. The Tayloe mixer acts like a (very sharp) tuned circuit at the LO frequency with a low impedance around the LO at the input and this impedance rising rapidly at offsets away from the carrier. This mixer configuration is 4 bus switches (or presumably any electronic switch) with the LO in a 4 phase configuration with a 1:3 duty cycle. The input is commoned and the outputs feed an audio low pass filter (simply a capacitor in the original circuit). Thus the circuit is a direct conversion system and can be used to feed an audio phase shift system for SSB reception. I would be intereested if anyone has ideas on the theoretical analysis of this configuration.

Richard

Jan Wagner <jwagner@cc.hut.fi> wrote in message
news:b1jch5smd1@nyytiset.pp.htv.fi...
> Hi,
>
> if I place a tuned tank on the output of a mixer (down conversion to
> IF), will it be reflected back to RF as a tank tuned to LO+IF?
>
> Just thinking whether or not the antenna tank could be left out... ;-)
>
> thanks,
>
> - Jan
>
>
>
>

931. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 19:20:10 UTC
From: lawrence.jones@eds.com
Message-ID: <abem1b.5in.ln@cvg-65-27-189-87.cinci.rr.com>
Source record: 38034
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Bob Peticolas <bobp@bobvette.com> wrote:
>
> Back to the point, "2-phase" is quite rare, in fact, I don't believe
> I've ever seen it in real life in over forty years in the business.

Where I've seen "2-phase" (and I agree it's rare), it's been two of the phases from a 3-phase Y along with the neutral.

-Larry Jones

Can I take an ax to school tomorrow for ... um ... show and tell? -- Calvin

932. HP5382A Help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 21:24:43 UTC
From: Steve <me@home.org>
Message-ID: <3e3eddb1_3@corp.newsgroups.com>
Source record: 38035

Hello all,
I was just given the above counter. After repairing the power switch (was hardwired due to broken switch) I powered it up. Display lights up OK and seems to work but it does not display any frequency at the input. Used my other counter and generator, no matter what frequency I put in it didn't show anything. Anyone have a manual or an online site I can look at with a schematic? Or a place I can get a copy of a service manual? Thanks in advance.

Steve W.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

933. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 21:27:28 UTC
From: Bob Myers <nospamplease@addressinvalid.com>
Message-ID: <3e3edec4_3@hpb10302.boi.hp.com>
Source record: 38036
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

"Carl R. Stevenson" <wk3cqth@wk3c.com> wrote in message
news:JulY9.606$N5.388950@nnrp1.ptd.net...

> (It's really scary that there are idiots out there that don't realize
> that the RF comes out of the antenna and not the earpiece ...
> and that claims that anything would "Protect you from 99% of
> the radiation" just had to be bogus ...)

Gee, Carl, you never heard of people concerned about
being ear-radiated? :-)

(Sorry, I couldn't resist....)

Bob M.

934. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 21:47:00 UTC
From: Idontwantspam@net
Message-ID: <3e3ee287.30594762@news.bellatlantic.net>
Source record: 38037
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

On Mon, 3 Feb 2003 14:27:28 -0700, "Bob Myers"
<nospamplease@addressinvalid.com> wrote:

>
>"Carl R. Stevenson" <wk3cqth@wk3c.com> wrote in message
>news:JulY9.606$N5.388950@nnrp1.ptd.net...
>
>> (It's really scary that there are idiots out there that don't realize
>> that the RF comes out of the antenna and not the earpiece ...
>> and that claims that anything would "Protect you from 99% of
>> the radiation" just had to be bogus ...)
>
>Gee, Carl, you never heard of people concerned about
>being ear-radiated? :-)
>
Just tell them that the sun is a large source of all types of
radiation, and in fact is powered by a nuclear reaction which is not
shielded.

Then they will hide at the bottom of a mineshaft to protect
themselves, and leaving you alone.

(Once they are at the bottom of the mineshaft, you can drop down a
note warning them about radon gas.)

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

935. Re: Need: Low voltage sidetone oscillator schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 23:05:38 UTC
From: k7itm@aol.com
Message-ID: <3200347.0302031505.67f74bee@posting.google.com>
Source record: 38039

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3e3befea.71333731@news.online.no>...
> To operate QRP boatanchor AM/CW transceivers (Torn.Fu.b1 and
> Torn.Fu.c), I need a sidetone oscillator operated on 1.4-1.9V supply
> voltage.
> Have no experience with construction circuit for lower voltage than
> 3V, so I wonder if you should have any references I could check?

I've used a couple simple 1.5V oscillator circuits for some time that seem to work reliably. In fact, both work down to below a volt with silicon transistors. One is a simple 2 transistor, 4 resistor, 2 capacitor astable flipflop. You can put a little audio transformer in series with one of the collector load resistors, adjusting the resistor to get the volume you want, to feed a speaker. The other is a "blocking oscillator" which uses a transformer with center tapped primary to get feedback. You can see an example of it in a circuit tracer probe at http://www.techlib.com/electronics/rbeeper.htm. You only need Q4, R6, R7, C1, T1, the speaker, and a resistor from base off to a key-down signal. It's possible to play with it to make wider pulses so the tone is a little softer. You should also be able to make a phase shift oscillator which produces something close to a sinewave, using a single transistor and a few Rs and Cs. It may be possible to drive a small speaker directly by putting it in the emitter lead of the transistor. You'll also find some variations on another theme for a relaxation oscillator that runs best on a bit higher voltage, in the www.techlib.com archives.

Cheers,
Tom

936. TiCK-4 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 23:06:09 UTC
From: Michael Goldweber <halciber@telerama.com>
Message-ID: <3E3EF5E0.4090140D@telerama.com>
Source record: 38038

Hi Everyone,

I was wondering if Embedded Research is still making the
TiCK-4 Keyer? I tried contacting them, but I haven't gotten
a response. When I didn't get a response, I went back to
their web site, and found that it hasn't been updated in
almost a year and a half. It is making me wonder if they
still exist.

Do any of you folks know if they still exist and are still
offering the TiCK-4 keyer kit? If not, can some please
offer an alternative kit?

Thanks,
Mike Goldweber
KB3IXO

937. Re: HP5382A Help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-03 23:53:06 UTC
From: donrm@soco.agilent.com
Message-ID: <1044316386.201226@cswreg.cos.agilent.com>
Source record: 38040

Steve <me@home.org> wrote:
> Hello all,
> I was just given the above counter. After repairing the power switch (was
> hardwired due to broken switch) I powered it up. Display lights up OK and
> seems to work but it does not display any frequency at the input. Used my
> other counter and generator, no matter what frequency I put in it didn't
> show anything. Anyone have a manual or an online site I can look at with a
> schematic? Or a place I can get a copy of a service manual? Thanks in
> advance.

Someone probably transmitted into it without benefit of an attenuator.

http://www.manualsplus.com/mpstore/find.asp?

and put 5382 into the search window; search type "contains".

73 Don K6LTS
donrm@soco.agilent.com

938. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 00:21:17 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0302031621.24518069@posting.google.com>
Source record: 38041
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

lawrence.jones@eds.com wrote in message
news:<abem1b.5in.ln@cvg-65-27-189-87.cinci.rr.com>...
> Bob Peticolas <bobp@bobvette.com> wrote:
> >
> > Back to the point, "2-phase" is quite rare, in fact, I don't believe
> > I've ever seen it in real life in over forty years in the business.

I understand that 3-phase is quite rare today, still not to be
confused with the bi-phase 230V service supplied to most home is the
US.

Harry C.

939. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 00:24:53 UTC
From: hhc314@yahoo.com
Message-ID: <7ce4e226.0302031624.88330d@posting.google.com>
Source record: 38042
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Instant correction...

In my previous post, the reference to 3-phase should have been
"2-phase". Context of that post should have made the error obvious,
but still...

Mea culpa. Sorry, and all that.

Harry C.

940. Re: TiCK-4 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 02:09:54 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v3u88fgss62558@corp.supernews.com>
Source record: 38044

Someone posted a similar query to QRP-L a few weeks back, and the response from one of the principals of Embedded Research was yes, they are still around, and yes, they still have the TiCK-4. However, they are somewhat slow in responding to orders, even slower responding to emails. It isn't their main source of income and like so many amateur run businesses, they are finding real life interfering with their hobby.

There are several similar kits out there, the Island Keyer comes to mind, but there are a few others. Each has a feature set that is a superset of the TiCK, and generally they tend to cost a few more dollars.

Personally, I finally decided it was better to roll my own. It's not all that tough to do a keyer with a PIC, and then you can get exactly what you want. Until I used my K1 for a while I hadn't realized all the things I didn't like about the TiCK. By writing my own, I could get what I wanted, and I found that there were some added advantages when I was homebrewing a rig.

If you are going to FDIM, I'm sure they will be there, or someone will be selling their stuff. In fact, you might check Morse Express, they may have TiCKs and if not, I'm pretty sure they will have something similar. I just took a peek, they have several (but not the TiCK) ...

http://www.morsex.com/keyers.htm

..

"Michael Goldweber" <halciber@telerama.com> wrote in message
news:3E3EF5E0.4090140D@telerama.com...
> Hi Everyone,
>
> I was wondering if Embedded Research is still making the
> TiCK-4 Keyer? I tried contacting them, but I haven't gotten
> a response. When I didn't get a response, I went back to
> their web site, and found that it hasn't been updated in
> almost a year and a half. It is making me wonder if they
> still exist.
>
> Do any of you folks know if they still exist and are still
> offering the TiCK-4 keyer kit? If not, can some please
> offer an alternative kit?
>
> Thanks,
> Mike Goldweber
> KB3IXO
>

941. Re: TiCK-4 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 02:10:24 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <V4ycnbdd-b-dvKKjXTWc3w@comcast.com>
Source record: 38043

Maybe something on this site will meet your needs:
http://www.mtechnologies.com/

Tom, N3IJ

"Michael Goldweber" <halciber@telerama.com> wrote in message
news:3E3EF5E0.4090140D@telerama.com...
> Hi Everyone,
>
> I was wondering if Embedded Research is still making the
> TiCK-4 Keyer? I tried contacting them, but I haven't gotten
> a response. When I didn't get a response, I went back to
> their web site, and found that it hasn't been updated in
> almost a year and a half. It is making me wonder if they
> still exist.
>
> Do any of you folks know if they still exist and are still
> offering the TiCK-4 keyer kit? If not, can some please
> offer an alternative kit?
>
> Thanks,
> Mike Goldweber
> KB3IXO
>

942. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 02:40:26 UTC
From: James Knott <bit_bucket@rogers.com>
Message-ID: <uKF%9.212138$ej1.106531@news02.bloor.is.net.cable.rogers.com>
Source record: 38045
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

Harry Conover wrote:

> I understand that 3-phase is quite rare today, still not to be
> confused with the bi-phase 230V service supplied to most home is the
> US.
>

3 phase is quite common in industry. Also, all the power generated is 3
phase, with home power coming from one phase. The local hydro will try to
balance the number of homes in a neighbourhood over the 3 phases.

--

Fundamentalism is fundamentally wrong.

To reply to this message, replace everything to the left of "@" with
james.knott.

943. Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 03:44:04 UTC
From: Bill Beal <bbeal@hilcozap.net>
Message-ID: <8GG%9.9$s7.14144@news.randori.com>
Source record: 38046

I am looking at building a simple all-band receiver. After going through a lot of the litature, I belive a first IF around 70 MHz would be a good candidate with a second conversion to a more resonable IF frequency (455 KHz to a few MHz). I have looked but not found a source for crystal filters at around 70 MHz. Preferably 8 poles with about a 15 KHz bandwidth is my desired goal. Does anybody sell these in small quantities (lots of 1) at a reasonable price (not the price of a top notch IF filter as for some of the commercial rigs)?

Bill, WD5HHH

944. Re: HP5382A Help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 13:32:41 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <ZxqdncJqLOofXKKjXTWcpA@comcast.com>
Source record: 37897

I have a couple HP counters, I've repaired a few 5328a's too (not 5382, however) -- make sure that the "Internal/External" source in the back is switched on Internal. You can also check to see whether the oscillator is humming by looking at the output in the rear.

"Steve" <me@home.org> wrote in message
news:3e3eddb1_3@corp.newsgroups.com...
> Hello all,
> I was just given the above counter. After repairing the power switch
(was
> hardwired due to broken switch) I powered it up. Display lights up OK and
> seems to work but it does not display any frequency at the input. Used my
> other counter and generator, no matter what frequency I put in it didn't
> show anything. Anyone have a manual or an online site I can look at with a
> schematic? Or a place I can get a copy of a service manual? Thanks in
> advance.
>
> Steve W.
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

945. MC3362 HF receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 14:42:11 UTC
From: f1jfp <f1jfp@clubobs.com>
Message-ID: <b1ojb7$527$1@news-reader11.wanadoo.fr>
Source record: 37899

Anyone could send me any anfo about:
Sprat Transceiver by George Dobbs G3RJV Part 1 38 July
Sprat Transceiver by George Dobbs G3RJV Part 2 38 Aug
published in PW in 1996
and perhaps all scanned pages ?
73's
Alain
F1JFP

946. Re: TiCK-4 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 14:43:42 UTC
From: Michael Goldweber <halciber@telerama.com>
Message-ID: <3E3FD19E.DF2E8C82@telerama.com>
Source record: 37898

Tom and Xpyttl,

Thanks for this information. I really appreciate your responses,
and I'm going to check out these web sites.

73,
Mike
KB3IXO

Tom Coates wrote:

> Maybe something on this site will meet your needs:
> http://www.mtechnologies.com/
>
> Tom, N3IJ
>
> "Michael Goldweber" <halciber@telerama.com> wrote in message
> news:3E3EF5E0.4090140D@telerama.com...
> > Hi Everyone,
> >
> > I was wondering if Embedded Research is still making the
> > TiCK-4 Keyer? I tried contacting them, but I haven't gotten
> > a response. When I didn't get a response, I went back to
> > their web site, and found that it hasn't been updated in
> > almost a year and a half. It is making me wonder if they
> > still exist.
> >
> > Do any of you folks know if they still exist and are still
> > offering the TiCK-4 keyer kit? If not, can some please
> > offer an alternative kit?
> >
> > Thanks,
> > Mike Goldweber
> > KB3IXO
> >

947. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 15:10:52 UTC
From: mikea@mikea.ath.cx
Message-ID: <b1ol5s$7k5$6@puck.litech.org>
Source record: 37900

(Newsgroups and followups reduced to just rec.radio.amateur.homebrew)

In <7ce4e226.0302031621.24518069@posting.google.com> (rec.radio.amateur.homebrew), Harry Conover wrote:
> lawrence.jones@eds.com wrote in message news:<abem1b.5in.ln@cvg-65-27-189-87.cinci.rr.com>...
> > Bob Peticolas <bobp@bobvette.com> wrote:
> > >
> > > Back to the point, "2-phase" is quite rare, in fact, I don't believe
> > > I've ever seen it in real life in over forty years in the business.

> I understand that 3-phase is quite rare today, still not to be
> confused with the bi-phase 230V service supplied to most home is the
> US.

Depends on where you are and what sort of service you request from your powerco. At work, the building feed is something like 13 KVAC 3-phase, my computer room UPS eats 480 VAC 3-phase, and the UPS output is 220 VAC 3-phase, all measured phase-to-neutral. But my house is 110 VAC "2-phase", which really is 220 VAC across the hot leads, with a center-tap neutral. The central heat, stove, and air conditioner are 220 VAC, and everything else is 10 VAC.

I could get a 220 or 480 VAC 3-phase service drop from the powerco if I were willing to pay for it, but I don't have any use for it.

--
MARACAS? I DON'T NEED ... MARACAS.

948. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 15:35:48 UTC
From: Idontwantspam@net
Message-ID: <3e3fdbe0.14157717@news.bellatlantic.net>
Source record: 37901

On Tue, 4 Feb 2003 15:10:52 +0000 (UTC), mikea@mikea.ath.cx (Mike
Andrews) wrote:

>(Newsgroups and followups reduced to just rec.radio.amateur.homebrew)
>
>In <7ce4e226.0302031621.24518069@posting.google.com> (rec.radio.amateur.homebrew), Harry
Conover wrote:
>> lawrence.jones@eds.com wrote in message
news:<abem1b.5in.ln@cvg-65-27-189-87.cinci.rr.com>...
>> > Bob Peticolas <bobp@bobvette.com> wrote:
>> > >
>> > > Back to the point, "2-phase" is quite rare, in fact, I don't believe
>> > > I've ever seen it in real life in over forty years in the business.
>
>> I understand that 3-phase is quite rare today, still not to be
>> confused with the bi-phase 230V service supplied to most home is the
>> US.
>
>Depends on where you are and what sort of service you request from
>your powerco. At work, the building feed is something like 13 KVAC
>3-phase, my computer room UPS eats 480 VAC 3-phase, and the UPS output

Yes, quite common in industrial settings, especially heavy industry.
Bring in a bunch of machine tools, welding equipment, and other
serious equipment and all of a sudden that doesn't look like a lot of
power.

Some people who do welding at home in serious way get the heavy duty
power installed, but it can cost as much as getting the rest of your
home electric service installed.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

949. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 16:17:29 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18a9877861bf5c8098972f@192.168.42.131>
Source record: 37902

In article <v30s7jst9t36a2@corp.supernews.com>, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> says...

<snippety>

> I would think that the plastic holders would also soften and deform. I
> use a fuse in the line that would blow long before the connector got
> hot enough to melt solder. I agree however that a mechanically secure
> joint is better - I just haven't found a reasonably priced tool to
> accomplish it reliably.

Well, speaking as one who resells mil-spec connectors as part of my
side business, I can tell you that 'reasonable' is very much a relative
term in the world of crimpers.

To my eyes, $100 or so does not seem at all unreasonable for a
good-quality tool, such as one that does a hex crimp, to work with any of
Anderson Power's connectors. Since there is some standardization in the
world of large-gauge wire lugs, it seems to me that same tool would be
useful for other electrical jobs as well.

I will grant, though, that the heavy crimpers are not generally
needed until you get down below about #12 wire. The primary leads in the
van's distribution system are #4 aircraft-grade, which means lots and
lots of strands (the stuff stops just shy of Litz wire).

Soldering was most definitely not an option in this case (I
probably would have needed a small torch), both in terms of stressing the
contact itself and in terms of the joint being unable to flex with the
vibrations found in any mobile environment.

Anyway... If you'd like some perspective, the three standard
crimping tool frames used for most of the cylindrical mil-spec connector
contacts, and for many of the coaxial connectors as well, range from
$200-$300. The pneumatic-powered versions of those same tools can easily
run from $700-$1,000+.

You also need the correct contact positioner for the specific
contact type, or range of types, that you're working with. They run
around $75.00 each, and there are literally hundreds of different types.

Insertion and extraction tools run from $20-$50 per. You don't
really need insert tools for any contact at size 16 and up, but they are
a must for the smaller contacts (size 20, 22, and 22D).

I hope that helps clear up why the 'ratchet' or 'hex-crimp' tools
are more expensive than the cheapies. ;-)

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

950. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 18:59:15 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b1p2i3$1uh$1@freenet9.carleton.ca>
Source record: 37903

Bill Beal (bbeal@hilcozap.net) writes:
> I am looking at building a simple all-band receiver. After going
> through a lot of the litature, I belive a first IF around 70 MHz would
> be a good candidate with a second conversion to a more resonable IF
> frequency (455 KHz to a few MHz). I have looked but not found a source
> for crystal filters at around 70 MHz. Preferably 8 poles with about a
> 15 KHz bandwidth is my desired goal. Does anybody sell these in small
> quantities (lots of 1) at a reasonable price (not the price of a top
> notch IF filter as for some of the commercial rigs)?
>
> Bill, WD5HHH
>
I don't know about specs, but an obvious (and cheap) source of
roofing filters would be old cellphones. The older the better
since the parts are more recognizable, and bigger. The four or
five I've taken apart, having bought them for a few dollars at
garage or rummage sales, haven't shown much of a pattern on
the filters, other than that they are all above 30MHz. From memory,
one was around 45Mhz, another in the 70MHz range, and another in
the 80MHz range. If you could get two identical phones, you could
cascade the filters if necessary to get a better shape factor.

The phones I've bought all had crystals to convert from this
IF down to 455KHz.

I once brought home a Motorola VHF receiver (or was it a transceiver?)
board that had a couple of three pin crystal filters in the 45MHz
range.

Other than that, or finding some by themselves at a hamfest,
the most obvious place would be transceiver manufacturers.
But considering the high cost of optional filters, I suspect
these would be really expensive, even if you could buy one.

I seem to recall seeing a KVG ad somewhere, maybe QEX, some
years back that listed a roofing filter. But it was at least
a hundred dollars.

I think there's virtually no market for single quantity filters,
so nobody is going to bother carrying them. Obviously they
are manufacturered, but getting one would be a problem.
Ten or fifteen years ago, I noticed somewhere that Fox,
that manufactures those cheap TTL oscillators in a can, supposedly
also made crystal filters. I mailed off for a catalog, and
must have asked about prices, since I got the catalog with
plenty details on various roofing filters, but the cover

letter said something about how their prices were proprietary.
Well, if I couldn't even get an idea of the price range, there
basically wasn't any sense in pursuing the filters any further.

Michael VE2BVW

951. Re: TiCK-4 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 19:47:25 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <GNU%9.24061$Rc7.351469@news2.e.nsc.no>
Source record: 37904

I recommend the keyers by K1EL, esp. the K10+. I have it and am very happy with it. It has more features than you'll ever use and only costs 8 USD.

Sverre LA3ZA
www.qsl.net/la3za

952. W8NX antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 21:27:02 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b1pbe4$e25$1@reader08.wxs.nl>
Source record: 37905

i want to build a W8NX antenna,
But i found some different versions of it.
At w4rnl his site are different lenghts as the one in the ARRL antenna handbook.

could anyone give me the dimensions (links Photo's) of a W8NX antenna ?
there could also be a qoustion left about the best way of feeding the traps (high Z , low Z).
What is best for working all bands fed with just 75 Ohm coax ?
Or could it be better being feed with 50Ohms and matched with a 1:2 Balun?

The Z of most of the bands are higher than 103 Ohm.

anyway if someone could help this Dutch radio amateur a bit further...he is almost with one leg at the stairs to th e roof :-)

Marco PE1LPK
Near Amsterdam

953. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 21:33:37 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <RkW%9.32497$zF6.2281024@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37906

I remember ordering the AM crystal filter for my KWM380. I contacted Piezo Technology, and they sold me one for 245 dollars. If I wasn't working for Collins at the time, they told me that they wouldn't even bother making it up.
Like Michael said, a good source of those filters are in old cell phones. Some of the 10 year old Motorola equipment used crystal filters at two frequencies; these were 45MHz and 45.1MHz. They also have the required crystal to downconvert to 455kHz. If you used a pair of 2-pole units, with an amplifier embeded in between them, you should get around 80dB of (2 X 2nd I.F) rejection, provided you use a diplexer after the 1st mixer. What I have been using has been a series L, shunt C network to match the mixer to the 1st crystal filter, and on the other leg, a parallel tuned circuit, with Xc and Xl approximately 50 Ohm through a 50 Ohm resistor, to ground. This circuit has a bandwidth of approximately 15kHz.

Pete

Michael Black <et472@FreeNet.Carleton.CA> wrote in message news:b1p2i3$1uh$1@freenet9.carleton.ca...
> Bill Beal (bbeal@hilcozap.net) writes:
> > I am looking at building a simple all-band receiver. After going
> > through a lot of the litature, I belive a first IF around 70 MHz would
> > be a good candidate with a second conversion to a more resonable IF
> > frequency (455 KHz to a few MHz). I have looked but not found a source
> > for crystal filters at around 70 MHz. Preferably 8 poles with about a
> > 15 KHz bandwidth is my desired goal. Does anybody sell these in small
> > quantities (lots of 1) at a reasonable price (not the price of a top
> > notch IF filter as for some of the commercial rigs)?
> >
> > Bill, WD5HHH
> >
> I don't know about specs, but an obvious (and cheap) source of
> roofing filters would be old cellphones. The older the better
> since the parts are more recognizable, and bigger. The four or
> five I've taken apart, having bought them for a few dollars at
> garage or rummage sales, haven't shown much of a pattern on
> the filters, other than that they are all above 30MHz. From memory,
> one was around 45Mhz, another in the 70MHz range, and another in
> the 80MHz range. If you could get two identical phones, you could
> cascade the filters if necessary to get a better shape factor.
>
> The phones I've bought all had crystals to convert from this
> IF down to 455KHz.
>
> I once brought home a Motorola VHF receiver (or was it a transceiver?)

> board that had a couple of three pin crystal filters in the 45MHz
> range.
>
> Other than that, or finding some by themselves at a hamfest,
> the most obvious place would be transceiver manufacturers.
> But considering the high cost of optional filters, I suspect
> these would be really expensive, even if you could buy one.
>
> I seem to recall seeing a KVG ad somewhere, maybe QEX, some
> years back that listed a roofing filter. But it was at least
> a hundred dollars.
>
> I think there's virtually no market for single quantity filters,
> so nobody is going to bother carrying them. Obviously they
> are manufacturered, but getting one would be a problem.
> Ten or fifteen years ago, I noticed somewhere that Fox,
> that manufactures those cheap TTL oscillators in a can, supposedly
> also made crystal filters. I mailed off for a catalog, and
> must have asked about prices, since I got the catalog with
> plenty details on various roofing filters, but the cover
> letter said something about how their prices were proprietary.
> Well, if I couldn't even get an idea of the price range, there
> basically wasn't any sense in pursuing the filters any further.
>
> Michael VE2BVW
>

954. WTB:G-10 CIRCUIT BOARD MATERIAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-04 21:59:19 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <XIW%9.32557$zF6.2282927@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37907

Looking for G-10 circuit board material for a project. Any lying around?Need enough for a 4x4" and a 2.125 x 7.125" area.
73 Joe

955. Re: HP5382A Help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 00:15:58 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <tFydnXs1ZZrRxd2jXTWcpw@comcast.com>
Source record: 37908

I should have said "output at the rear with a scope", I guess I have
changed too many diapers in my day.

Jack

"john walton" <jdwalton@comcast.net> wrote in message
news:ZxqdncJqLOofXKKjXTWcpA@comcast.com...
> I have a couple HP counters, I've repaired a few 5328a's too (not 5382,
> however) -- make sure that the "Internal/External" source in the back is
> switched on Internal. You can also check to see whether the oscillator is
> humming by looking at the output in the rear.
>
> "Steve" <me@home.org> wrote in message
> news:3e3eddb1_3@corp.newsgroups.com...
> > Hello all,
> > I was just given the above counter. After repairing the power switch
> (was
> > hardwired due to broken switch) I powered it up. Display lights up OK
and
> > seems to work but it does not display any frequency at the input. Used
my
> > other counter and generator, no matter what frequency I put in it didn't
> > show anything. Anyone have a manual or an online site I can look at with
a
> > schematic? Or a place I can get a copy of a service manual? Thanks in
> > advance.
> >
> > Steve W.
> >
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

956. Re: Anderson Powerpole

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 00:52:17 UTC
From: Sylvan Butler <Znospam+noZs_0302@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnb40o21.g7l.Znospam+noZs_0302@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 37909

On Tue, 4 Feb 2003 08:17:29 -0800, Bruce Lane <SpammersAreVermin@dev.nul> wrote:
> Well, speaking as one who resells mil-spec connectors as part of my
> side business, I can tell you that 'reasonable' is very much a relative
> term in the world of crimpers.

> Anyway... If you'd like some perspective, the three standard
> crimping tool frames used for most of the cylindrical mil-spec connector
> contacts, and for many of the coaxial connectors as well, range from
> $200-$300. The pneumatic-powered versions of those same tools can easily
> run from $700-$1,000+.

I don't consider any prices associated with "mil-spec" to be
anything other than an anomoly to be discarded without before it
contaminates the rest of the data. If the prices are good, great,
if they aren't, oh well. There is too much random variability in
the prices commanded by "mil-spec" to have any relation to reality.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

957. FS: Heil boom mic headset

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 01:19:31 UTC
From: k9sqg@aol.com
Message-ID: <20030204201931.24295.00000301@mb-ck.aol.com>
Source record: 37910

Have for sale a new in the box Heil 5-5 boom mic headset. This is the single earpiece model with the full range (ragchew) element. Bought it new at Hamvention in 2002 and it is still in the box, unused. Price is $90 shipped to your door, CONUS only please.

Thanks for reading the posting.

73s,

Evan

958. Re: W8NX antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 02:12:41 UTC
From: bjorn890@aol.com57445747
Message-ID: <20030204211241.20125.00000476@mb-cj.aol.com>
Source record: 37911

Make the length of each leg of the anntenna 1/2 wavelength at your lowest freqeuncy then use a 6:1 balun and feed that with 50ohm coax.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

959. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 02:15:04 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b1ps3a$hn8$1@slb6.atl.mindspring.net>
Source record: 37912

I don't recall an easy source of 70 Mhz filters, but I have seen 45 MHz filters on Digikey for something like $18 each. Not bad....

Although it would require better selectivity on the front end of the radio. However, to get strong signal handling, you are probably going to use front end filters anyway.

Here is the Digikey part number:

410-1004-1-ND

It is 14 KHz wide.

Jim Pennell
N6BIU

960. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 02:24:02 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <6B_%9.21372$rq4.1581840@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37913

Also he might try http://www.minicircuits.com/filters.html

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:b1ps3a$hn8$1@slb6.atl.mindspring.net...
> I don't recall an easy source of 70 Mhz filters, but I have seen 45 MHz
> filters on Digikey for something like $18 each. Not bad....
>
> Although it would require better selectivity on the front end of the
> radio. However, to get strong signal handling, you are probably going to
> use front end filters anyway.
>
> Here is the Digikey part number:
>
> 410-1004-1-ND
>
> It is 14 KHz wide.
>
>
> Jim Pennell
> N6BIU
>
>

961. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 02:25:07 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <7C_%9.161686$ui1.4516387@news1.east.cox.net>
Source record: 37914

Watch eBay. I bought a pair 18-kHz BW Network Science roofing
filters a year or so back fairly cheaply. Fc was 40.455 kHz.

Pete

"Bill Beal" <bbeal@hilcozap.net> wrote in message
news:8GG%9.9$s7.14144@news.randori.com...
> I am looking at building a simple all-band receiver. After going
> through a lot of the litature, I belive a first IF around 70 MHz would
> be a good candidate with a second conversion to a more resonable IF
> frequency (455 KHz to a few MHz). I have looked but not found a source
> for crystal filters at around 70 MHz. Preferably 8 poles with about a
> 15 KHz bandwidth is my desired goal. Does anybody sell these in small
> quantities (lots of 1) at a reasonable price (not the price of a top
> notch IF filter as for some of the commercial rigs)?
>
> Bill, WD5HHH
>

962. Re: Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 03:07:52 UTC
From: Walter Harley <walterh@cafewalter.com>
Message-ID: <v41008liv14o4b@corp.supernews.com>
Source record: 37915
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Winfield Hill" <whill@picovolt.com> wrote in message
news:b1gtq402qtt@drn.newsguy.com...
> Actually, perhaps I should take the jellybean bit back. The
> LMC6482, like all rail-to-rail output opamps, suffers from
> high open-loop output impedance, which makes it harder to use
> with capacitive loads.

Second that motion. Wasted a lot of time over the weekend trying to control an LMC662. Had 62 ohms in series with its output, which consisted effectively of a 13k resistor in parallel with probably 50pF of cable and whatnot. It sat there oscillating like a madman, at about 600kHz, 0.5V (a single 9v supply provided by a battery). Caps in the feedback loop did little or nothing up to the point where even my audio-band response was compromised. It finally worked, moderately well, to put 620R in series with the output. But even then it still rings a bit... For the final design of the thing I'm working on I'll use LMC662's on the input stages where I need high Z ins and don't have to drive a capacitor, but I'll use LM358's on the outputs. I don't need rail to rail, but I do need single supply operation down to about 6.5V.

Like real jellybeans, I find that I have to keep a couple of flavors of opamp in stock: there is no single best candidate. But they're *all* pretty cheap.

-w

963. Re: Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 03:49:00 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E41DBBF.9BCEA2C7@rica.net>
Source record: 37916
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Walter Harley wrote:
>
> "Winfield Hill" <whill@picovolt.com> wrote in message
> news:b1gtq402qtt@drn.newsguy.com...
> > Actually, perhaps I should take the jellybean bit back. The
> > LMC6482, like all rail-to-rail output opamps, suffers from
> > high open-loop output impedance, which makes it harder to use
> > with capacitive loads.
>
> Second that motion. Wasted a lot of time over the weekend trying to control
> an LMC662. Had 62 ohms in series with its output, which consisted
> effectively of a 13k resistor in parallel with probably 50pF of cable and
> whatnot. It sat there oscillating like a madman, at about 600kHz, 0.5V (a
> single 9v supply provided by a battery). Caps in the feedback loop did
> little or nothing up to the point where even my audio-band response was
> compromised. It finally worked, moderately well, to put 620R in series with
> the output. But even then it still rings a bit...
(snip)

Have you ever tried loading the output with a series RC to ground, instead of putting a resistor in series between the output and load? This lowers the output impedance while rolling the high frequency response, instead of raising it. Pick a pair that have a time constant between the period and half the period of the oscillation so the impedance is essentially resistive at the oscillation frequency. Try pairs of about 2 to 1 value steps up and down, keeping the time constant unchanged till you find the optimum response.

In this case I might have tried putting the 620 ohm in series with a 2n7 or a 1n.

--
John Popelish

964. Re: Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 03:53:42 UTC
From: John Larkin <jjlarkin@highSNIPlandTHIStechPLEASEnology.etc>
Message-ID: <1e214v8aldbv7hfsotnkk5f2ege6ojfngs@4ax.com>
Source record: 37917
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 1 Feb 2003 08:49:08 -0800, Winfield Hill <whill@picovolt.com>
wrote:

>Winfield wrote...
>>
>>Spef wrote...
>>>
>>> You can use half of an LM358 (a dual) but they are all about the
>>> same price per chip. There is no *jellybean* (universally popular,
>>> cheap and no-brainer first choice) single-supply op-amp
>>> that I can think of- ...
>>
>> The LM358 you mention comes pretty close, being half of an LM324,
>> which surely is a jelly bean. 'Course old jellybeans can sit
>> there ignored as we reach for nice jelly-filled dark chocolate.
>>
>>> you could look at CMOS amplifiers such as National's LMCxxx
>>> series. I'm sure there's something nice in an SOT23-5. ;-)
>>
>> I like dual opamps. Want four? use two duals, same space.
>>
>> LMC6482 is pretty cool, with rail-rail inputs and outputs.
>> http://www.national.com/pf/LM/LMC6482.html Free samples.
>> 20fA input current, 20mA out, a current gain of 10^12. :>)
>> 1.5MHz, 1 V/us and under 90 cents quantity 1k, seems a nice
>> jellybean candidate to me. Hmm, what about second sources?
>
> Actually, perhaps I should take the jellybean bit back. The
> LMC6482, like all rail-to-rail output opamps, suffers from
> high open-loop output impedance, which makes it harder to use
> with capacitive loads.
>
> For example, I'm just now analyzing a opamp-controlled current
> source with a MJH11021 250V 15A PNP darlington transistor, and
> the '6482 is making the circuit very hard to compensate without
> completely destroying its high-frequency response. (Adding a
> 1k5 load to the '6482 didn't help. Using an IRF9640 p-channel
> MOSFET instead of the BJT stopped the ringing, but reduced the
> response by 10x, due to the FET's much higher capacitance.)
>
> Replacing the '6482 with an LF411 (I needed input operation to
> the + rail, which was why I chose the '6482 in the first place)
> solved the problem, allowing response to 100kHz. This can be

> attributed to the LF411's low ~ 40-ohm open-loop Zout. Most
> other BJT opamps would likely also prove able to drive my big
> BJT, e.g., an OP27 worked fine (after adding a 2nd supply).
> But I tried a 741, just for fun, and it oscillated madly. :>)
>
> Thanks,
> - Win

Win,

have you used the LM8261 (dual = LM8272) ? It's r-r on input and
output and drives an unlimited capacitive load. It's neat for driving
things like fat fet gates or bypassed Vref rails.

John

965. HP 8711B vs. 8712B????

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 04:55:34 UTC
From: Jari <Jari.0jala@pkcgroup.com>
Message-ID: <3E40995D.8A93EE4A@kotinet.com>
Source record: 37918

Any body know? Its differenses between these equipment on on jumper settings?

Jari

>

966. RHG Logamp info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 08:18:35 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <XXudnYW0msNoVd2jXTWcqg@comcast.com>
Source record: 37919

Hello, and thanks for reading this. I just got an RHG Log IF amplifier. It uses a 9 pin "D" connector for power. Do you have the pin-out for this connector? Thanks John

967. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 09:06:16 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e40d32c.2305254@news.freeserve.net>
Source record: 37920

On Tue, 04 Feb 2003 03:44:04 GMT, Bill Beal <bbeal@hilcozap.net>
wrote:

>I am looking at building a simple all-band receiver. After going
>through a lot of the litature, I belive a first IF around 70 MHz would
>be a good candidate with a second conversion to a more resonable IF
>frequency (455 KHz to a few MHz). I have looked but not found a source
>for crystal filters at around 70 MHz. Preferably 8 poles with about a
>15 KHz bandwidth is my desired goal. Does anybody sell these in small
>quantities (lots of 1) at a reasonable price (not the price of a top
>notch IF filter as for some of the commercial rigs)?
>
Bill, Barend in Holland have some surplus Hi Mhz filters that may do
the job, quite cheap too.
look here
http://www.barendh.com

hth Mike W

968. Re: Scope Pic - Elecraft K2 CW Envelope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 11:11:56 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <8vn14v4qv400f6o074tbin0svqtkpevrnm@4ax.com>
Source record: 37925

On Wed, 05 Feb 2003 12:35:12 GMT, JS <wd1v@amsat.org> opined thusly:

>Everyone knows K2 rigs hear great and sound great. It should come as no
>surprise that on scope screens, K2s also look great!
>
>Here is a link to a really gorgeous K2 Keying Envelope created with
>a high performance digital scope using deep (24 Million Sample)
>deep memory.
>
>http://www.qsl.net/wd1v/LECROY.JPEG

The point being?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

969. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 11:57:07 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.0302051328001.9252-100000@kosh.hut.fi>
Source record: 37921

On Mon, 3 Feb 2003, Richard Hosking wrote:
> The mixer's performance and input impedance will depend on what load it is
> looking into. It is best for most mixers to look into a broadband resistive
> load so that all the likely output products are terminated in a predictable
> fashion.

Ok, thanks!

What I inted to build is a digitally controlled direct conversion receiver
or scanner for 1 MHz - 40 MHz AM/SSB/CW, as a RF hobby starter project,
but I'm not sure about the antenna feed-in circuit for this, and there
aren't any radio scanner schematics around, and the ARRL handbook
nor RF coursebooks are very helpful on scanner design...

Seems like a 40MHz low-pass will just have to suffice here?
No bothering about matched antenna impedance an such? (it's for Rx)

> A tuned circuit at the output will obviously be reactive at most
> frequencies. A broadband resistive load could be a resistive pad (easy but
> lossy) or a diplexer (better but harder to do).

Hmm, yes. I'll go resistive pad then. Maybe. ;)

> Interestingly I think there
> is a situation where your question does apply. The Tayloe mixer acts like a
> (very sharp) tuned circuit at the LO frequency with a low impedance around
> the LO at the input and this impedance rising rapidly at offsets away from
> the carrier. This mixer configuration is 4 bus switches (or presumably any
> electronic switch) with the LO in a 4 phase configuration with a 1:3 duty
> cycle. The input is commoned and the outputs feed an audio low pass filter
> (simply a capacitor in the original circuit). Thus the circuit is a direct
> conversion system and can be used to feed an audio phase shift system for
> SSB reception.

Sounds interesting! I'll have to read up on that. The detector response
doesn't look good beyond a few MHz, at least not at
http://www.hanssummers.com/radio/polyphase/index.htm but maybe a different
detector capacitor bank arrangement will do better...

many thanks!

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

970. Scope Pic - Elecraft K2 CW Envelope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 12:35:12 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-5032B2.07351005022003@netnews.attbi.com>
Source record: 37922

Everyone knows K2 rigs hear great and sound great. It should come as no surprise that on scope screens, K2s also look great!

Here is a link to a really gorgeous K2 Keying Envelope created with a high performance digital scope using deep (24 Million Sample) deep memory.

http://www.qsl.net/wd1v/LECROY.JPEG

72/73
John Seney, WD1V [FN42]
QRP ARCI 10345 K2 #1388
FIST #5014 CC: 1151
http://www.qsl.net/wd1v
HP Velo Recumbent Biker

971. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 15:46:26 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.0302051721500.22851-100000@kosh.hut.fi>
Source record: 37924

> If you are doing a direct conversion you will not need a filter at 40 MHz as
> the signal is converted direct to audio.

Yeah, for IF side (<16kHz) no 40MHz low pass filter is required of
course...

But good to hear the antenna side doesn't require one either. Certainly
gets much simpler. :)

> Of course direct conversion will be
> difficult with AM due to the heterodyne, though you could possible go to
> some sort of synchronous detector. I was looking at the new AD995X series of
> DDS when they become available - they can output to 160 MHz and you divide
> by 4 to get quadrature outputs for the LO.

Actually, you can get samples of their AD9854, "CMOS 300 MHz Quadrature
Complete-DDS Synthesizer" (which I've already ordered samples for on last
weekend). It has simultaneous quadrature I/Q outputs on-board. Just LP
filter these and there you go... :) But it's "only" usable up to
1/3*300MHz = 100MHz LO or thereabouts.
The AD9954 seems to be a "normal" DDS, just 180 deg phase shifted
outputs. At least if the preliminary datasheet is to be trusted.

cheers,

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

972. 7.5V CT transformer at 51 Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 19:31:14 UTC
From: da Valve <sabbatai_zvi@hotmail.com>
Message-ID: <9oo24vgbiioo4brs6jobpt496pquoaa2pc@4ax.com>
Source record: 37926

I wonder if anyone ever builds anything in the way of a large RF amplifier using tubes that require this new iron that is surplus to my needs:

7.5V Filament Xfmr for a BIG RF amplifier project...
Thordarson 21F26 Transformer. Top Quality.
115/230V AC Primary 50/60 Hz to 7.5 Volts C.T. at 51 Amps.
Dimensions: 5" wide X 4.5" Deep X 4" tall
Will sell for $110.00 plus shipping
E-mail me for pictures

973. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 22:32:20 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Uhg0a.109096$GX4.4734304@news2.east.cox.net>
Source record: 37927

"Jim Adney" <jadney@vwtype3.org> wrote in message
news:0c3p3vkv2pfs5pjp23mvklrlqo2ok1k3qp@4ax.com...
> On Fri, 31 Jan 2003 23:24:06 GMT "Doug" <dougmelissa@tm.net> wrote:
>
> >Is this tantamount to the fact that the current output
> >of the xtal set is limited and that if R is too low the 'theoretical'
> >current
> >per ohm's law (i=V/R) exceeds the capacity of the xtal set?
> >If that is the case (and my guess is that I'm way off base here),
> >then a resistor in series with speaker should work, right.
>
> That's a reasonable way to put it.
>
> Adding a resistor in series would keep you from drawing too much
> current from the set, but then you only get a fraction of the total
> available power into the speaker; the rest is wasted in the resistor.
> The goal is to get it all into the speaker.
>
> OTOH, I have no idea where one might find a 2000 ohm speaker. 2000 ohm
> headphones used to be available and this was what was commonly used in
> crystal sets. Your best bet for finding such a pair today is probably
> at a swap meet.
>
> -
> --
> Jim Adney jadney@vwtype3.org
> Madison, WI 53711 USA
> --

Bypass the resistor with a capacitor.

Pete

974. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-05 22:33:37 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <5jg0a.109103$GX4.4734675@news2.east.cox.net>
Source record: 37928

I am not to read all of the replies first, but here goes:

Simply use the output transformer and speaker from an
AA5 tube radio. It will be close enough to 2k ohms to work.

Peter

"Doug" <dougmelissa@tm.net> wrote in message
news:l0n_9.49$Bd.77621@newshog.newsread.com...
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug
>
>

975. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 00:31:46 UTC
From: mikea@mikea.ath.cx
Message-ID: <b1sadiogi4@puck.litech.org>
Source record: 37929

Paul Burridge <redscar@waitrose.notthisbit.com> wrote:
> On Fri, 31 Jan 2003 23:24:06 GMT, "Doug" <dougmelissa@tm.net> opined
> thusly:

> >Is this tantamount to the fact that the current output
> >of the xtal set is limited and that if R is too low the 'theoretical'
> >current
> >per ohm's law (i=V/R) exceeds the capacity of the xtal set?
> >If that is the case (and my guess is that I'm way off base here),
> >then a resistor in series with speaker should work, right.

> 'Fraid not. Yes, you won't overload the set's output, but you won't be
> generating any useful sound output from it, either. Your set needs to
> 'see' an impedance of 2000 ohms presented to it. Your suggestion means
> that you present it with say an 8 ohm speaker in series with a 1992
> ohm resistor (yes I know they don't make 'em but you know what I'm
> getting at). All well and good so far as the set is concerned.
> However, you're going to uselessly dissipate the vast majority of the
> available output power in the resistor at the ratio of 1992:8 which
> will still leave you with diddly-squat volume. The idea is to
> dissipate all the available output power into a *useful* load - and a
> resistor just ain't one! In the *true* spirit of vintage radio, I'm
> afraid there's no alternative to hi-impedance speaker/phones.

None?

Is there something that would keep a transformer from working?
One of those teenly little RatShack audio output transformers
would present an impedance in the right neighborhood to the
diode-and-coil.

The one on my desk is 1K Ohms to 8 Ohms. Seems a bit low, but there
are others available.

--
... just what are we going to say to an alien race if we make contact?
"Do you have Napster?"
"Can we borrow one of your rainforests?"
"Stop making crop circles!" -- Scott Barber, in rasfw

976. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 00:51:47 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E41B1A3.3EC6A4E8@ieee.org>
Source record: 37930

Uncle Peter wrote:

> I am not to read all of the replies first, but here goes:
>
> Simply use the output transformer and speaker from an
> AA5 tube radio. It will be close enough to 2k ohms to work.
>
> Peter
>
> "Doug" <dougmelissa@tm.net> wrote in message
> news:l0n_9.49$Bd.77621@newshog.newsread.com...
> > A design for a crystal set calls for a 2000 ohm speaker
> > and says a smaller, 8 ohm type will not work.
> > The one for my walkman measures 26 ohms, the small
> > speaker from radio shack measures 8 ohm - measured
> > with ohmmeter (is that correct method?).
> >
> > Can someone explain why a set would work with a
> > large but not small impedance speaker?
> >
> > Finally, where can I obtain a 2000 ohm speaker?
> >
> > Thanks,
> > Doug
> >
> >

I have been reading some of this thread and am wondering if anyone ever
measured the source impedance of the output of a "typical" crystal set.

That shouldn't be hard to do. The biggest problem would be to decide
the configuration of the crystal set / antenna.

Bill K7NOM

977. WTB: S-100 BUS CPU board or complete system

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 03:09:11 UTC
From: Alan <adiaz224@earthlink.net>
Message-ID: <rlk0a.1554$tO2.189213@newsread1.prod.itd.earthlink.net>
Source record: 37931
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I'm working on building an old S-100 system. Need S-100 CPU board or even a complete S-100 system if you still have one around. Also still trying to locate a modem for an S-100 system, or related peripherals if you have any. email me directly please. Thank you.
Alan

978. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 03:19:04 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E41D49B.690AE9AE@cox.net>
Source record: 37932

A 40 MHz low pass filter will not be good enough. Any detector you use, whether a Tayloe detector or a diode mixer will respond to harmonics, especially odd harmonics. I would suggest that you use sharp low pass filters placed at least on binary frequency values, i.e., 40 MHz, 20 MHz, 10 MHz, 5 MHz, etc.

This will help keep out higher order harmonics out of the receiver. For this type of application, the Tayloe detector is good because it has inherent rejection of signals away from the detection frequency.

I have worked with a pair of the AD9851 (?) DDSs phase locked 90 degrees apart and found that they caused a lot of noise in the Tayloe type detector above 14 MHz or so. If you want to go to 40 MHz, it may be better to use a normal diode bridge since they are not as susceptible to the DDS LO noise as that detector. The Tayloe detector works best at these higher frequencies with a clean LO from a good quality analog VFO.

The Tayloe detector is essentially an R/C low pass filter that has been aliased to the incoming frequency. The R is the system impedance, and the C is the detection caps. The detector capacitors integrate the incoming RF signal pulses producing a smoothed difference frequency, and suppressing off frequency signals by the R/C roll off. The 4:1 duty cycle of the mux produces four phases, 0, 90, 180, and 270 degree outputs. Each output is roughly 4x the impedance of the input (single 50 ohm in, four 200 ohm outputs). The detector has only 0.9 db of loss because of the integrating properties and because only a difference frequency is produced (no sum). Since the normal 4:1 mux chip is a dual part (two muxs), a double balanced version is does not require any additional parts other than an input transformer to feed the two halves. Both halves of the double balanced detector share the same four detector caps.

In any event, beware that a DDS has spurs that will pick up off frequency signals, especially if the front end is a low pass filter and not the tighter ham band only bandpass filter.

- Dan, N7VE

Jan Wagner wrote:
>
> On Mon, 3 Feb 2003, Richard Hosking wrote:
> > The mixer's performance and input impedance will depend on what load it is
> > looking into. It is best for most mixers to look into a broadband resistive
> > load so that all the likely output products are terminated in a predictable
> > fashion.
>

> Ok, thanks!
>
> What I inted to build is a digitally controlled direct conversion receiver
> or scanner for 1 MHz - 40 MHz AM/SSB/CW, as a RF hobby starter project,
> but I'm not sure about the antenna feed-in circuit for this, and there
> aren't any radio scanner schematics around, and the ARRL handbook
> nor RF coursebooks are very helpful on scanner design...
>
> Seems like a 40MHz low-pass will just have to suffice here?
> No bothering about matched antenna impedance an such? (it's for Rx)
>
> > A tuned circuit at the output will obviously be reactive at most
> > frequencies. A broadband resistive load could be a resistive pad (easy but
> > lossy) or a diplexer (better but harder to do).
>
> Hmm, yes. I'll go resistive pad then. Maybe. ;)
>
> > Interestingly I think there
> > is a situation where your question does apply. The Tayloe mixer acts like a
> > (very sharp) tuned circuit at the LO frequency with a low impedance around
> > the LO at the input and this impedance rising rapidly at offsets away from
> > the carrier. This mixer configuration is 4 bus switches (or presumably any
> > electronic switch) with the LO in a 4 phase configuration with a 1:3 duty
> > cycle. The input is commoned and the outputs feed an audio low pass filter
> > (simply a capacitor in the original circuit). Thus the circuit is a direct
> > conversion system and can be used to feed an audio phase shift system for
> > SSB reception.
>
> Sounds interesting! I'll have to read up on that. The detector response
> doesn't look good beyond a few MHz, at least not at
> http://www.hanssummers.com/radio/polyphase/index.htm but maybe a different
> detector capacitor bank arrangement will do better...
>
> many thanks!
>
> - Jan
>
> --
> **********
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR

979. Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 04:12:20 UTC
From: Michael Franks <pikemike@nnex.net>
Message-ID: <v43o5jirgmtjbf@corp.supernews.com>
Source record: 37933

I am interested in building a solid state AM transmiter (80 and 40 meters).
Would like to have xtal control, about 50 watts. Anyone know of an article
about a project like this ??...What is the transistor equivalent of "Plate
Modulation" ??

Please respond via Email...TNX and 73

--
Michael Franks, MD
pikemike@nnex.net

980. Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 05:30:06 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BA675D0D.D6E9%stewart@say.net>
Source record: 37934

We're moving to Europe for several years and I'd like to convert a 110v stereo system subwoofer to 110/220v (switchable or auto sensing).

A quick look inside suggests it would not be too difficult, but what do I know (my knowledge of electronics is basic). However, if it is indeed possible (and I don't see why it isn't), I do know I can do it if someone tells me how.

Anyway, here is what I have. Inside the subwoofer, there is a transformer that powers a small circuit board (the crossover). The numbers on the transformer are E128081 and LF5730-16-3. The faceplate says the input is 32w (120v, 60 Hz).

There are two red wires coming off the main power switch to the transformer. The red wires and power cord wires are sealed, so I can't really see exactly how they are connected. I guess I'll discover that once I start the conversion.

On the other side of the transformer, there are three wires coming off the transformer to the circuit board. The wires are yellow, yellow with black letters, and black.

Finally, there is a ground wire connected to the bolt holding the transformer. This seems to be the ground for both the circuit board and metal faceplate.

Is this conversion possible? What do I need (components and part numbers)? How would I do it (wiring steps)? And finally, is there anything special I should be aware of while doing this.

Okay, I know I'm asking a lot but the newsgroups are my last hope. I've already been turned down by two electronic stores (one wasn't willing to do it and the other tried to sell me a new subwoofer - 110v only of course). Because of that, your help is most appreciated.

And, yes, I know this has nothing to do with ham radio. But I also know the homebrew crowd seldom limit their activities to just ham radio. So, if anyone can provide answers, that person is most likely to be found here.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

981. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 05:54:16 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e411ace$0$3069@echo-01.iinet.net.au>
Source record: 37923

If you are doing a direct conversion you will not need a filter at 40 MHz as the signal is converted direct to audio. Of course direct conversion will be difficult with AM due to the heterodyne, though you could possible go to some sort of synchronous detector. I was looking at the new AD995X series of DDS when they become available - they can output to 160 MHz and you divide by 4 to get quadrature outputs for the LO.

Richard

Jan Wagner <jwagner@kosh.hut.fi> wrote in message news:Pine.OSF.4.50.0302051328001.9252-100000@kosh.hut.fi...
>
> On Mon, 3 Feb 2003, Richard Hosking wrote:
> > The mixer's performance and input impedance will depend on what load it is
> > looking into. It is best for most mixers to look into a broadband resistive
> > load so that all the likely output products are terminated in a predictable
> > fashion.
>
> Ok, thanks!
>
> What I inted to build is a digitally controlled direct conversion receiver
> or scanner for 1 MHz - 40 MHz AM/SSB/CW, as a RF hobby starter project,
> but I'm not sure about the antenna feed-in circuit for this, and there
> aren't any radio scanner schematics around, and the ARRL handbook
> nor RF coursebooks are very helpful on scanner design...
>
> Seems like a 40MHz low-pass will just have to suffice here?
> No bothering about matched antenna impedance an such? (it's for Rx)
>
>
> > A tuned circuit at the output will obviously be reactive at most
> > frequencies. A broadband resistive load could be a resistive pad (easy but
> > lossy) or a diplexer (better but harder to do).
>
> Hmm, yes. I'll go resistive pad then. Maybe. ;)
>
>
> > Interestingly I think there
> > is a situation where your question does apply. The Tayloe mixer acts like a
> > (very sharp) tuned circuit at the LO frequency with a low impedance

around
> > the LO at the input and this impedance rising rapidly at offsets away
from
> > the carrier. This mixer configuration is 4 bus switches (or presumably
any
> > electronic switch) with the LO in a 4 phase configuration with a 1:3
duty
> > cycle. The input is commoned and the outputs feed an audio low pass
filter
> > (simply a capacitor in the original circuit). Thus the circuit is a
direct
> > conversion system and can be used to feed an audio phase shift system
for
> > SSB reception.
>
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> doesn't look good beyond a few MHz, at least not at
> http://www.hanssummers.com/radio/polyphase/index.htm but maybe a different
> detector capacitor bank arrangement will do better...
>
> many thanks!
>
> - Jan
>
> --
> **********
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR
>

982. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 08:40:20 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <b1t729$vme@newton.cc.rl.ac.uk>
Source record: 37935

"Dwight Stewart" <stewart@say.net> wrote in message
news:BA675D0D.D6E9%stewart@say.net...
>
> Is this conversion possible? What do I need (components and part
> numbers)? How would I do it (wiring steps)? And finally, is there
anything
> special I should be aware of while doing this.
>
> Okay, I know I'm asking a lot but the newsgroups are my last hope. I've

Possible - Yes. Pointless - Yes.

It would be far easier for you to buy a cased autotransformer to run your hi-fi off 110V in Europe. These are available for various power ratings from Electronics suppliers (not the high street). You can get these with the right plugs and sockets already fitted.

To convert your equipment would probably require a replacement transformer which may not fit in the case. With 220V, if you don't know what you are doing, we could also soon have one less member in the group.

Mike

983. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 10:09:33 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <80644v0rcp3iqpvv5rshhn0292i3rsvurm@4ax.com>
Source record: 37936

On Fri, 31 Jan 2003 20:23:54 -0000, "Mark Hales"
<markhals@nospamdircon.co.uk> wrote:

>A book called "The voice of the crystal" by H. Peter Friedrichs (I got mine
>from Lindsay publications) shows how to make high impedence headphones from
>guitar pickups and shoe polish tins and crystal headphones from piezo
>lighters.

Many old crystal sets specified a piezo earpiece because of the high
impedance. They were still common in those plug in the ear earpieces
that came with the miniature 1960/1970's miniature transistor radios.

Anyway the OPs request for a 2000 ohm speaker loads the resonant
circuit quite heavily, so I would suggest looking for those piezo
earpieces.

Paul OH3LWR

984. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 10:17:15 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e423576.2910914@news.freeserve.net>
Source record: 37937

On Thu, 6 Feb 2003 08:40:20 -0000, "Mike" <m.j.willis @rl.ac.uk>
wrote:

>"Dwight Stewart" <stewart@say.net> wrote in message
>news:BA675D0D.D6E9%stewart@say.net...
>>
>> Is this conversion possible? What do I need (components and part
>> numbers)? How would I do it (wiring steps)? And finally, is there
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>> special I should be aware of while doing this.
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>
>Possible - Yes. Pointless - Yes.
>
>It would be far easier for you to buy a cased autotransformer to run your
>hi-fi off 110V in Europe. These are available for various power ratings from
>Electronics suppliers (not the high street). You can get these with the
>right plugs and sockets already fitted.
>
>To convert your equipment would probably require a replacement transformer
>which may not fit in the case. With 220V, if you don't know what you are
>doing, we could also soon have one less member in the group.
>
>Mike
>
>
with only 32w input it would be quite easy to use a small 220v/110v
transformer as an auto transformer. They are readily available over
here, costing about 10-15 dollars. The 220v potentially is'nt too
frightening HI.
bcnu in EU, Mike W G8NXD

985. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 13:34:16 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <gdicnY5w_ax5-d-jXTWcoQ@comcast.com>
Source record: 37938

If you like Rube Goldberg projects -- (how often do we substitute a complex solution for an easy one?)

For a subwoofer you could easily use an off-line switching supply with a pair of chokes (100uH) and linear regulators to take care of the spikes. The off-line switcher chips from On-Semi will take 90 to 240 volts and there is a PCB layout right on ON-Semi's website.

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3e423576.2910914@news.freeserve.net...
> On Thu, 6 Feb 2003 08:40:20 -0000, "Mike" <m.j.willis @rl.ac.uk>
> wrote:
>
> >"Dwight Stewart" <stewart@say.net> wrote in message
> >news:BA675D0D.D6E9%stewart@say.net...
> >>
> >> Is this conversion possible? What do I need (components and part
> >> numbers)? How would I do it (wiring steps)? And finally, is there
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I've
> >
> >Possible - Yes. Pointless - Yes.
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> >It would be far easier for you to buy a cased autotransformer to run your
> >hi-fi off 110V in Europe. These are available for various power ratings
from
> >Electronics suppliers (not the high street). You can get these with the
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transformer
> >which may not fit in the case. With 220V, if you don't know what you are
> >doing, we could also soon have one less member in the group.
> >
> >Mike
> >
> >
> with only 32w input it would be quite easy to use a small 220v/110v
> transformer as an auto transformer. They are readily available over
> here, costing about 10-15 dollars. The 220v potentially is'nt too
> frightening HI.
> bcnu in EU, Mike W G8NXD

986. HP 200CD ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 14:06:57 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v44r0dh9ik7i2b@corp.supernews.com>
Source record: 37939

Anyone ever converted an HP 200CD to solid state or seen any articles?
tnx
hank wd5jfr

987. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 14:15:37 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <E7u0a.861$5v3.86807@newsfep1-win.server.ntli.net>
Source record: 37940

> We're moving to Europe for several years and I'd like to convert a 110v
> stereo system subwoofer to 110/220v (switchable or auto sensing).
>
> A quick look inside suggests it would not be too difficult, but what do
I
> know (my knowledge of electronics is basic). However, if it is indeed
> possible (and I don't see why it isn't), I do know I can do it if someone
> tells me how.
>
> Anyway, here is what I have. Inside the subwoofer, there is a
transformer
> that powers a small circuit board (the crossover). The numbers on the
> transformer are E128081 and LF5730-16-3. The faceplate says the input is
> 32w (120v, 60 Hz).
============
The simplest way to make your 110 V equipment suitable for 230 V in Europe
is to buy a 50 Hz isolation transformer (in Europe) or using an existing
110/230 V - 50Hz transformer in auto-transformer mode using a single tapped
transformer winding. This can be safely done if the transformer is not
marginal ,hence can normally handle say 50 -100 Watts (using your 32 Watts
equipment)

While normally living in Scotland ,I am doing the same when visiting the USA
to
supply low power 230V equipment with 115-120V
using a relatively large 50 Hz transformer in auto-transformer
mode.

However there is another matter namely that of FREQUENCY.

A transformer designed for 50 Hz usually works well on 60Hz , but not always
the other way around.

If the 60 Hz transformer is marginal (capacity wise) it MIGHT get hot when
used on a 50Hz supply.

If that would appear to be the case with your specific equipment , I would
suggest you buy a small replacement 50Hz equivalent transformer when in
Europe .
But before doing that measure the output voltage(s) of the current
transformer while still in the USA.

BTW in EU countries the AC -50 Hz domestic supply voltage has now been
harmonised to 230 Volts ,meaning that in Britain the 240 V has been somewhat
reduced and in continental Europe the voltage has been increased from 220 to
about 230 V ,such that consumer electric/electronic equipment can be

sold/used across the EU. The equipment voltage rating of equipment with the CE symbol is now usually 220 - 240 V with (sometimes) separate power ratings stated for the extreme supply voltages
Earlier ,for example, a continental clothing iron rated 220V-1500Watts often did not survive for very long when used in Britain.
At my (rural) QTH the supply voltage is nowadays usually 236 - 237 volts .

Frank gm0csz.kn6wh@ntlworld.com

988. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 14:56:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1tt36$s27$1@helle.btinternet.com>
Source record: 37941

The crystal+phones circuit can be impedance-matched to the antenna+tuned
circuit by tapping the crystal down the coil.

At the same time the selectivity of the tuned circuit is not damped any more
than necessary.

For 2000-ohm phones first try tapping 2/3rds or 3/4 of the way down the
coil. There will be a marked increase in selectivity.

Reg, G4FGQ

--
=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================
"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:80644v0rcp3iqpvv5rshhn0292i3rsvurm@4ax.com...
> On Fri, 31 Jan 2003 20:23:54 -0000, "Mark Hales"
> <markhals@nospamdircon.co.uk> wrote:
>
>
> >A book called "The voice of the crystal" by H. Peter Friedrichs (I got
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> >from Lindsay publications) shows how to make high impedence headphones
from
> >guitar pickups and shoe polish tins and crystal headphones from piezo
> >lighters.
>
> Many old crystal sets specified a piezo earpiece because of the high
> impedance. They were still common in those plug in the ear earpieces
> that came with the miniature 1960/1970's miniature transistor radios.
>
> Anyway the OPs request for a 2000 ohm speaker loads the resonant
> circuit quite heavily, so I would suggest looking for those piezo
> earpieces.
>
> Paul OH3LWR
>

989. Re: Scope Pic - Elecraft K2 CW Envelope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 15:04:59 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3E42799B.1794E120@ix.netcom.com>
Source record: 37942

Actually, I'd have thought that it would sound a lot better if it were shaped on both edges, not just the leading edge. FWIW

dr

990. Re: HP 200CD ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 15:10:24 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3E427ADF.5847488E@ix.netcom.com>
Source record: 37943

Henry Kolesnik wrote:

> Anyone ever converted an HP 200CD to solid state or seen any articles?
> tnx
> hank wd5jfr

Why would you want to do that Hank? There are a bunch of the different versions of the hp solid state oscillator around, 204 209 etc., I've seen them for $25 or so at the swaps... The tube versions are preferred by those audio fanatics who are into the "tube sound" anyway.
dr

991. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 17:38:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v457boq2dg0g9e@corp.supernews.com>
Source record: 37944

There's another potential consequence of the lower frequency. If power supply filtering is marginal (which is likely with a consumer item), the voltage will sag too much between cycles, resulting in a potentially very loud 100 Hz hum or buzz. If it's present, the subwoofer should reproduce it very well! The cure for this is to increase the value of the power supply filter capacitor by at least 20% -- or you could just add another capacitor in parallel with the existing one. The added capacitor should have a value at least 1/5 the value of the existing one.

Roy Lewallen, W7EL

Frank Dinger wrote:
> . . .
> However there is another matter namely that of FREQUENCY.
>
> A transformer designed for 50 Hz usually works well on 60Hz , but not always
> the other way around.
>
> If the 60 Hz transformer is marginal (capacity wise) it MIGHT get hot when
> used on a 50Hz supply.
> . . .

992. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 19:26:30 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <cr554vg5uelnjuvo7sk9p18iberf51ohml@4ax.com>
Source record: 37945

On Thu, 6 Feb 2003 14:56:39 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>The crystal+phones circuit can be impedance-matched to the antenna+tuned
>circuit by tapping the crystal down the coil.
>
>At the same time the selectivity of the tuned circuit is not damped any more
>than necessary.
>
>For 2000-ohm phones first try tapping 2/3rds or 3/4 of the way down the
>coil. There will be a marked increase in selectivity.

Unfortunately tapping down the tuned circuit will also reduce the
voltage applied to the crystal, but the diode threshold voltage
remains the same, thus reducing the sensitivity. I think it would be a
better idea to let the diode operate at the full RF voltage and only
transform the audio voltage for the low impedance headphones.

Paul OH3LWR

993. Re: HP 200CD ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 19:27:54 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v45dpug2opv27a@corp.supernews.com>
Source record: 37946

I've got some bids on ebay SS units...
tubes are getting scarce and they don't allow for portability...
mostly curiousity..
hank wd5jfr
"Dan Rae" <rae4@ix.netcom.com> wrote in message
news:3E427ADF.5847488E@ix.netcom.com...
>
>
> Henry Kolesnik wrote:
>
> > Anyone ever converted an HP 200CD to solid state or seen any articles?
> > tnx
> > hank wd5jfr
>
> Why would you want to do that Hank? There are a bunch of the different
> versions of the hp solid state oscillator around, 204 209 etc., I've seen
> them for $25 or so at the swaps... The tube versions are preferred by
> those audio fanatics who are into the "tube sound" anyway.
> dr
>

994. FA: Vac relay & Simpson vom

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 21:12:42 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <edA0a.35484$zF6.2521983@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37947

Very nice Simpson Roto-Ranger vom model 221 on eBay now:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3005752375
or see seller heytubeguy

Beautiful vac relay on eBay now.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3005095273
or see seller heytubeguy

995. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 21:14:05 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1uj6s$bb7$1@knossos.btinternet.com>
Source record: 37948

It's obvious you have never made or used a crystal set. Why not make one and educate yourself in both elementary practice and theory.

Tap the crystal down the tuning coil until the loudest signal can be heard in the phones. That setting corresponds to the best impedance match (maximum power transfer). It is quite obvious that setting will also give you maximum audio voltage across the phones and maximum audio current through the phones.

If the signal is sufficiently loud then tap the crystal further down the coil to obtain greater selectivity, less damping of the tuned circuit, and less interference from nearby unwanted stations.

Then perhaps you will stop cramming the wrong ideas into genuine novices.

996. sat can help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-06 22:29:42 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1044573132.368835@auth2.dns.griffin.net.uk>
Source record: 37949

hi there

i am experimenting with a10ghz data link..the transmitter is easy using a sofan unit, but i wish to make the rx out of a surplus sat can, the reason being i have lots of them.problem is i need the pin out and any data on the can so i can work out/see if its got an AFC..
so the sat can is marked up BSF-560A.its in two parts ie 2 cans in a frame total length about 6 inches (no comments please) single f type rf in, mini coaxial out.
any help in identifing the can would be much appreciated..

thanks simon

997. Re: oscilloscope as a frequency counter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 00:42:14 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.c5c0454bc0.a80320igor@argonet.co.uk>
Source record: 37950

Depends a lot on what frequencies and how accurately you want to measure them

1) At power frequencies,as Wim Ton says, feed your unknown into one input and the time-controlled power frequency into another. Count the "Beats", check the pattern and do the sums to calculate your frequency.Works well to check frequencies that are multples or sub-multiples of the line frequency

2) Near 15kHz: feed your line time-base into one input and puzzle out the frequency by comparing one trace with the other.

3)At BC frequencies: feed your local BC signal and your unknown, as 2). Gets problematic at higher frequencies.

I have run out of ideas, so

4)Buy (or build) a frequency meter. Check against WWV.

G.H.Ireland.

--

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__ __ __ __ __ ___ ___________________________________________
|__||__)/ __/ \|\ ||_ | /
| || \\__/\__/| \||__ | /...Internet access for all Acorn RISC machines
____________________________/ igor@argonet.co.uk
```

998. motorola ht600 toolkit help, "MATH DEVICE" error 2to6

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 01:47:21 UTC
From: John Smith <john@somewhere.com>
Message-ID: <b1v3me$te1$1@news1.usf.edu>
Source record: 37951
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Hey guys/gals,
I downloaded the toolkit for modifying motorola HT's I can't open it because it gives me an error of

```
????????????????????????????????????????????????????????????
? WARNING! WARNING! WARNING! WARNING! WARNING! WARNING! ?
? The MATH DEVICE is either not connected to one of your ?
? LPT ports or the program may not be compatible with this ?
? computer. ?
? (Press ENTER to restart and try again). ?
????????????????????????????????????????????????????????????
```

very strange, anyone have any ideas on how to get it to work? I need to convert some ht600 from 2 to 6 chan. so that they can be useful for a new amateur radio club.

Chris

999. FA: Tektronix 494AP spectrum analyzer with lots of accessories

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 03:05:55 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <7MGcnT4bYLGov96jXTWcqg@giganews.com>
Source record: 37952
Cross-posted to:
rec.radio.amateur.homebrew,sci.electronics.equipment,rec.radio.amateur.equipment,misc.industry.electronics.marketplace

This Tek 494AP spectrum analyzer comes with all manuals and accessories for coverage between 10 kHz and 26.5 GHz. Built-in frequency counter with 1 Hz resolution and marker capability; too many other features to list. Sweep filters, measure phase noise, check IMD, diagnose parasitics, and impress visitors!

Comes with circuit-board extenders and a full set of manuals. .PDF of operator's manual available on request (whether bidding or not) -- remove spam-blocked portion of my address to email me.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3310898744

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1000. Re: motorola ht600 toolkit help, "MATH DEVICE" error 2to6

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 03:10:57 UTC
From: VE1PHK <ve1phk@rac.ca>
Message-ID: <5tF0a.2424$o61.310336@ursa-nb00s0.nbnet.nb.ca>
Source record: 37953
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Sounds like the program you have requires a HArdware Key conected to you
Printer Port..

Good Luck..

"John Smith" <john@somewhere.com> wrote in message
news:b1v3me$te1$1@news1.usf.edu...
> Hey guys/gals,
> I downloaded the toolkit for modifying motorola HT's I can't open it
because
> it gives me an error of
>
> ??
> ? WARNING! WARNING! WARNING! WARNING! WARNING! WARNING! ?
> ? The MATH DEVICE is either not connected to one of your ?
> ? LPT ports or the program may not be compatible with this ?
> ? computer. ?
> ? (Press ENTER to restart and try again). ?
> ??
>
> very strange, anyone have any ideas on how to get it to work? I need to
> convert some ht600 from 2 to 6 chan. so that they can be useful for a new
> amateur radio club.
>
> Chris
>
>
>

1001. Re: motorola ht600 toolkit help, "MATH DEVICE" error 2to6

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 03:29:20 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E432810.4010407@attbi.com>
Source record: 37954
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

I'd say the same thing, also some Motorola software is real fussy about
the computers it runs on. About 5 years ago the Coast Guard had to find
some old Heath laptops to program some of their radios.
Bill Higdon
VE1PHK wrote:
> Sounds like the program you have requires a HArdware Key conected to you
> Printer Port..
>
> Good Luck..
>
>
>
>
> "John Smith" <john@somewhere.com> wrote in message
> news:b1v3me$te1$1@news1.usf.edu...
>
>>Hey guys/gals,
>>I downloaded the toolkit for modifying motorola HT's I can't open it
>
> because
>
>>it gives me an error of
>>
>> ??
>> ? WARNING! WARNING! WARNING! WARNING! WARNING! WARNING! ?
>> ? The MATH DEVICE is either not connected to one of your ?
>> ? LPT ports or the program may not be compatible with this ?
>> ? computer. ?
>> ? (Press ENTER to restart and try again). ?
>> ??
>>
>>very strange, anyone have any ideas on how to get it to work? I need to
>>convert some ht600 from 2 to 6 chan. so that they can be useful for a new
>>amateur radio club.
>>
>>Chris
>>
>>
>>
>
>
>

1002. Re: motorola ht600 toolkit help, "MATH DEVICE" error 2to6

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 03:42:09 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18accaec8dc3d595989741@192.168.42.131>
Source record: 37955

In article <b1v3me$te1$1@news1.usf.edu>, john@somewhere.com says...

> Hey guys/gals,
> I downloaded the toolkit for modifying motorola HT's I can't open it because
> it gives me an error of

<snippety-bippy>

The 2to6.exe file, as I recall, needs to be run under DOS 6.22. No higher. And, for that matter, you may need to find an old-and-slow machine to run it on.

FWIW: If you just need a few radios programmed <SHAMELESS PLUG ALERT!>, I can deal with it. See http://www.bluefeathertech.com/rf.html

For further assistance with Motorola goodies, see:

http://www.batlabs.com

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

1003. For all of those hobbiest who love 'keep it simple simon' projects, I've got an amazing FM receiver!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 05:10:52 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0302062110.70ed67ca@posting.google.com>
Source record: 37956

Hello all,

I try to go to as many electronic/hobbiest forums to post my one transistor FM receiver. I know there are hobbiest out there who love to make simple circuits...and my project definately falls into that category.

I could type for hours telling you of the extra-ordinary sensitivity and selectivity is has...but if you do read what Pedro...Phillip...and Murphy had to say about their maiden journey...you will never know what you are missing. And believe me, that is still an 'understatment'.

Pedro was very sceptical in the beginning of getting a so called 'one' transistor FM receiver to function at all...much less work! But to his amazement, he carried out my instructions to a 't'...and it worked fine!

I call this design...The Radio Shack Special...since all of the parts may be purchased there. I did not want to have hobbiests have to mail order ANYTHING. I kept that is mind with the design.

Yes, it's a one transistor (MPF102) FM receiver. Of course, since the audio out is but a few milli-volts, it had to be beefed up with an LM386.

When you get to my website, just scroll down until you see the words...

The Radio Shack Special Project

...from there you will be on your own...unless, for some reason, you should need my help. I will do anything I can to help you get it to work. I know it works....I have already made 10 of them.

Even if you have never made a simple project before...I even have construction plans on ....how to make your first PCB (printed circuit board)...plus another section on how to make homemade coils...in which these two items are needed for the Radio Shack Special Project.

Do let me know what you intentions are...if you choose to make the project, I would love for you to send pictures and a documentary after you have completed a successful journey. I will then make a special webpage, just for you and your project...for others to have more of an incentive...should they decide to make the project also.

With that said....I will be here at my e-mail address, should you need ANY type of help with the project. That is what I am here for. Not just to post a typical schematic on the WWW, but to let all know that I am your

backboard...should concerns come up along the way.

How does it work? A few HAM operators have asked me that question. I also have the 'theoredical' on the website also....it gives an explanation on how superrenerative receivers operate.

So my friend, do drop me a line should your interest continue. I will make a special folder just for you...for your pictures and documentary of the precious little jewel.

...and let the project begin!

I want to thank each and everyone at this forum for giving me the time to type my request.

Respectfully,

Patrick Cambre Web site address: http://braincambre500.freeservers.com

E-mail address: braincambre500@yahoo.com

P.S. Sometimes my web site goes disabled...by keeping my e-mail on hand, I will personally attend to your concerns.

1004. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 06:57:33 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BA68C30C.DEB9%stewart@say.net>
Source record: 37957

"Mike" wrote:
>
> (snip) It would be far easier for you
> to buy a cased autotransformer to run
> your hi-fi off 110V in Europe. These
> are available for various power ratings
> from Electronics suppliers (not the
> high street). You can get these with the
> right plugs and sockets already fitted.

Yep, after spending eleven years in Europe (ten in Germany and one in Italy), I'm aware of simple 110/220 volt transformers. Sadly, I'm also aware of the nuisance of using them. This will be an extended trip. Because of that, I've replaced just about everything I'm taking with 110/220v items. Sadly, I haven't found a compact subwoofer to satisfy me. If I'm not willing to use a transformer, this leaves two options - convert what I have or hope to find a replacement there. Since I don't like the unknown (finding something there), I'm researching the conversion idea.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

1005. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 07:10:06 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BA68C5FD.DEBB%stewart@say.net>
Source record: 37958

"Roy Lewallen" wrote:
>
> There's another potential consequence
> of the lower frequency. If power supply
> filtering is marginal (which is likely
> with a consumer item), the voltage will
> sag too much between cycles, resulting
> in a potentially very loud 100 Hz hum
> or buzz. If it's present, the subwoofer
> should reproduce it very well! (snip)

This is another major concern. I've seen this with 110v 60Hz items used overseas, particularly with radio and stereo equipment. In fact, I had a shortwave receiver with this problem, as well as a Kenwood stereo receiver. I solved the problems by running the shortwave receiver off batteries and I sold the stereo component to a GI returning to the states.

> The cure for this is to increase the
> value of the power supply filter
> capacitor by at least 20% -- or you
> could just add another capacitor in
> parallel with the existing one. The
> added capacitor should have a value
> at least 1/5 the value of the existing
> one.

A guy who converted stuff to 220v at the military PX told me something about this but it didn't make much sense at the time (perhaps because his English was not so perfect). Your explanation is a little more clear.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

1006. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 07:20:42 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BA68C87A.DEBD%stewart@say.net>
Source record: 37959

"Dwight Stewart" wrote:

>
> We're moving to Europe for several years and I'd like to convert a 110v
> stereo system subwoofer to 110/220v (switchable or auto sensing).

Thanks to all that responded so far. What I have now sounds simple enough. I need to replace the power transformer with a similar wattage output 220v one. The wiring should be very similar to what exists unless I choose a 110/220v power transformer. If that is the case, I need to add a switch to select the windings based on the voltage used.

Filtering potential hum may be a problem, but Roy suggested some steps I could take to prevent this (increasing the value of the filter capacitor or adding another capacitor in parallel).

Can anyone think of anything else or add anything to what I already have?

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

1007. Re: Scope Pic - Elecraft K2 CW Envelope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 09:56:05 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E4382B5.5060807@mwci-news>
Source record: 37960

JS wrote:
> Everyone knows K2 rigs hear great and sound great. It should come as no
> surprise that on scope screens, K2s also look great!
>
> Here is a link to a really gorgeous K2 Keying Envelope created with
> a high performance digital scope using deep (24 Million Sample)
> deep memory.
>
> http://www.qsl.net/wd1v/LECROY.JPEG
>
>
> 72/73
> John Seney, WD1V [FN42]
> QRP ARCI 10345 K2 #1388
> FIST #5014 CC: 1151
> http://www.qsl.net/wd1v
> HP Velo Recumbent Biker

The sharp trailing edge creates strong clicks, and
should be "rounded" by filtering. See chapter 17
of the 2003 ARRL Handbook.

Bill W0IYH

1008. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 10:27:31 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <b201nn$tca@newton.cc.rl.ac.uk>
Source record: 37961

> Yep, after spending eleven years in Europe (ten in Germany and one in
> Italy), I'm aware of simple 110/220 volt transformers. Sadly, I'm also
aware
> of the nuisance of using them. This will be an extended trip. Because of
> that, I've replaced just about everything I'm taking with 110/220v items.
> Sadly, I haven't found a compact subwoofer to satisfy me. If I'm not
willing
> to use a transformer, this leaves two options - convert what I have or
hope
> to find a replacement there. Since I don't like the unknown (finding
> something there), I'm researching the conversion idea.
>
>
Have you considered buying a new sub? They cost about £100. Or, you could buy some decent speakers so you don't need a sub at all for say £500. You really can get good stuff here - we of course maintain it is better than what you can get over there. What does it cost to ship all this stuff from W5?

I am aware of the 50/60 Hz issue but many US devices are able to cope. The 100Hz ripple should only happen at high load. The 32W input rating seems very low for a compact sub. It translates to perhaps 25W RMS. LF needs power as small sized drivers are inefficient, unless resonant - and we don't want that do we!

1009. Looking for website, TV tuner modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 12:57:26 UTC
From: PaoloC <fake.address@asdrubale.net>
Message-ID: <3e43acb8$1@news.opennet.it>
Source record: 37962

Hi.
I remember reading either on this newsgroup or on some QRP list about a modification to transform a TV tuner into a 6m (broadband) antenna preamplifier.

I just ran across one of those modules, but unfortunately I can't remember the website with the article. Can anyone help?

Thanks!
Paolo

1010. Documentation needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 14:27:31 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <gfP0a.181$Cf.37558@news.iquest.net>
Source record: 37963
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap,rec.radio.amateur.misc

I have the following "experienced" equipment that need manuals and any documentation there may be.

Lafayette Model 9905015 Signal Generator (RF and AF)

BK Precision Model 3020 Sweep Function Generator

Tek 465B O-Scope

Ramsey CT-50 Freq Counter

I'm looking to buy, or trade for these documents....

Can anyone help me out?

73 de KB9BVN

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

1011. Re: Documentation needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 15:10:39 UTC
From: AC6V <none@nowhere.com>
Message-ID: <P%P0a.1129$LW1.235824@news1.west.cox.net>
Source record: 37964
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap,rec.radio.amateur.misc

Try BAMA
http://bama.sbc.edu/

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Scrounger" <brian@iquest.net> wrote in message
news:gfP0a.181$Cf.37558@news.iquest.net...
> I have the following "experienced" equipment that need manuals and any
> documentation there may be.
>
>
> Lafayette Model 9905015 Signal Generator (RF and AF)
>
> BK Precision Model 3020 Sweep Function Generator
>
> Tek 465B O-Scope
>
> Ramsey CT-50 Freq Counter
>
> I'm looking to buy, or trade for these documents....
>
> Can anyone help me out?
>
> 73 de KB9BVN
>
>
> --
>
> ==
> KB9BVN/QRP - New Whiteland IN - EM69WN
> QRP-ARCI #10223 QRP-L #1540 FIST #5695
> FISTS CC #764 - Proud Member ARRL
> HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
> INTO INFAMOUS AF4PS ATTIC DIPOLE
> SOC #400 AND FLYING PIGS QRP #-57
> ==
>
>

>

1012. Help Needed to ID MOSTEK Part

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 15:17:18 UTC
From: alihernlem@hotmail.com
Message-ID: <54058474.0302070717.6ded01da@posting.google.com>
Source record: 37965

Anyone recognize a round metal can 10-pin part bearing the markings?:

MOSTEK
MK6057L
1818-0048

I think that the last number MIGHT be an HP number.

Any help appreciated.

TNX

Brad

1013. Re: Documentation needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 16:28:47 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18ad7e9e28b2649b989745@192.168.42.131>
Source record: 37966
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap,rec.radio.amateur.misc

In article <gfP0a.181$Cf.37558@news.iquest.net>, brian@iquest.net says...

> I have the following "experienced" equipment that need manuals and any
> documentation there may be.

<snip>

http://www.manualsplus.com

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1014. Automatic band change for Yaesu Quadra and FL-7000 amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 16:32:40 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <apn74v8891j88k61mghth49vijbke5frah@4ax.com>
Source record: 37967

My Quadra amplifier now comes on whenever I turn on my ICOM IC-756PRO, follows it from band to band from 160 meters to 6 meters (all WARC bands included), and selects the appropriate antenna port and ATU presets just as if it was connected to a Yaesu transceiver.

This can also be done with most other modern transceivers.

See http://www.qsl.net/ab4oj/quadra/w4uk.html for full details and cable wiring instructions.

No mods to the transceiver or the amp are required.

FL-7000 users can apply the same information, but actual wiring instructions are only provided for the Quadra. (FL-7000 uses a different plug).

More:

Yaesu's method of band changing uses a TTL level 4-bit code. When the code is generated inside compatible Yaesu transceivers and fed to the amp by the Yaesu "band data" cable, the amplifier follows the transceiver from band to band and also enables antenna tuner presets . Any method of generating a similar code will cause the amp to switch just as if the transceiver were a Yaesu.

Ham logging program developers followed the Yaesu code to implement what they typically call "antenna relay" switching on a LPT port. Most current logging programs provide antenna relay signals, so those logging programs emulate the band-data signals of a genuine Yaesu-compatible transceiver. The LPT port provides TTL level signals, the Yaesu amp uses them directly - only a cable is required to connect the LPT to the amp. I used my Yaesu band-data cable by adding a $3 plug from radio Shack.

Jerry Flanders, W4UK

1015. Need coil form

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 16:40:32 UTC
From: jcplpsm@aol.communicate
Message-ID: <20030207114032.08918.00000244@mb-cg.aol.com>
Source record: 37968

Does anyone have a good source for coil forms? T have tried all my usual sources, AES, Dicks, etc. I need a form that is 2 3/4" long with an inside diameter of 3/8". The outside diameter can't be more than 9/16", as this is the needed dimension, but can be smaller. I can always build it up. The original form is phenolic, but I believe paper will do fine. The inside diameter is critical as it is slug tuned.

Thanks for any suggestions in advance.

Scott M.
WN1B

1016. Re: Looking for website, TV tuner modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 17:06:12 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b20p24$be2$1@freenet9.carleton.ca>
Source record: 37969

"PaoloC" (fake.address@asdrubale.net) writes:
> Hi.
> I remember reading either on this newsgroup or on some QRP list about a
> modification to transform a TV tuner into a 6m (broadband) antenna
> preamplifier.
>
> I just ran across one of those modules, but unfortunately I can't remember
> the website with the article. Can anyone help?
>
> Thanks!
> Paolo
>
>
I believe it's this site:
http://www.cgfar.com/vk3cjs/vk3cjs_page7.asp
certainly it talks about doing what you suggest.

I think someone once posted about it here, because I have it bookmarked
and I don't remember coming across it by accident.

Michael VE2BVW

1017. LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 19:11:13 UTC
From: Larry W <larry@scuttlebutt.org>
Message-ID: <Xns931B8F0A05170scuttlebutt@65.24.2.12>
Source record: 37970

Many years ago there was an article in CQ magazine on building a simple power supply using the LM7812. The output voltage of the LM7812 could be tweaked to whatever voltage in .6 volt increments by using diodes in the ground circuit of the LM7812. By using three diodes the output voltage could be adjusted to exactly 13.8 volts. Since moving I have lost the article in the shuffle and would really appreciate if someone could give some help on finding this schematic.

Thank,

Larry

lweaver at yahoo.com

1018. If you live in San Diego...read this please

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 20:33:10 UTC
From: tomypiglet@hotmail.com
Message-ID: <aKU0a.73945$x9.18535511@twister.socal.rr.com>
Source record: 37971

Need to get rid of garage FULL of insulators, capacitors, transformers, resistors, manuals, schematics etc. If you live in San Diego, please e-mail asap.

1019. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 21:06:49 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <JdV0a.9428$tQ1.406402@news2.east.cox.net>
Source record: 37972

"Bill Janssen" <billj@ieee.org> wrote in message
news:3E41B1A3.3EC6A4E8@ieee.org...
>
>
> Uncle Peter wrote:
>
> > I am not to read all of the replies first, but here goes:
> >
> > Simply use the output transformer and speaker from an
> > AA5 tube radio. It will be close enough to 2k ohms to work.
> >
> > Peter
> >
> > "Doug" <dougmelissa@tm.net> wrote in message
> > news:l0n_9.49$Bd.77621@newshog.newsread.com...
> > > A design for a crystal set calls for a 2000 ohm speaker
> > > and says a smaller, 8 ohm type will not work.
> > > The one for my walkman measures 26 ohms, the small
> > > speaker from radio shack measures 8 ohm - measured
> > > with ohmmeter (is that correct method?).
> > >
> > > Can someone explain why a set would work with a
> > > large but not small impedance speaker?
> > >
> > > Finally, where can I obtain a 2000 ohm speaker?
> > >
> > > Thanks,
> > > Doug
> > >
> > >
>
> I have been reading some of this thread and am wondering if anyone ever
> measured the source impedance of the output of a "typical" crystal set.
>
> That shouldn't be hard to do. The biggest problem would be to decide
> the configuration of the crystal set / antenna.
>
> Bill K7NOM
>
>
>
The DC and AC loads are critical. Even with 2K earphones, an improvement
in distortion can be had by using a series resistor bypassed with an audio
capacitor. Ben Tongue (of Blonder Tongue fame) has a great website that

delves into crystal detector loading.

Pete

1020. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 21:09:53 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v488572gaat062@corp.supernews.com>
Source record: 37973

The schematic is easy - just put the string of diodes between ground and the common lead of the LM7812, with the cathode ends towards ground. Three silicon diodes will give about 0.6 x 3 or a 1.8 volt increase in the output.

1021. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 21:20:13 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <hqV0a.9484$tQ1.410199@news2.east.cox.net>
Source record: 37974

Here's the link to Ben's website on crystal set design:

http://uweb.superlink.net/bhtongue/

He covers just about everything.

Pete

"Doug" <dougmelissa@tm.net> wrote in message
news:l0n_9.49$Bd.77621@newshog.newsread.com...
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug
>
>

1022. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-07 22:49:12 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <IJW0a.37214$zF6.2650524@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37975

At the sacrafice of regulation...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:v488572gaat062@corp.supernews.com...
> The schematic is easy - just put the string of diodes between ground
> and the common lead of the LM7812, with the cathode ends towards
> ground. Three silicon diodes will give about 0.6 x 3 or a 1.8 volt
> increase in the output.
>
>

1023. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 00:36:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v48k9mhv4afhf3@corp.supernews.com>
Source record: 37976

Three diodes will cause the output vary with temperature at the rate of
about minus 6 - 7 mV per degree C, if that matters.

Roy Lewallen, W7EL

Brian Griffey wrote:
> At the sacrafice of regulation...
>
> --
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
> Brian Griffey
> See the SkyWave Linear Amplifier at
> http://home.att.net/~briangriffey/Index.html
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>
>
> "Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
> news:v488572gaat062@corp.supernews.com...
>
>>The schematic is easy - just put the string of diodes between ground
>>and the common lead of the LM7812, with the cathode ends towards
>>ground. Three silicon diodes will give about 0.6 x 3 or a 1.8 volt
>>increase in the output.
>>
>>
>
>
>

1024. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 01:52:14 UTC
From: youngkim@yksystems.com
Message-ID: <ecc0cb9c.0302071752.74107924@posting.google.com>
Source record: 37977

Larry W <larry@scuttlebutt.org> wrote in message
news:<Xns931B8F0A05170scuttlebutt@65.24.2.12>...
> Many years ago there was an article in CQ magazine on building a simple
> power supply using the LM7812. The output voltage of the LM7812 could be
> tweaked to whatever voltage in .6 volt increments by using diodes in the
> ground circuit of the LM7812. By using three diodes the output voltage
> could be adjusted to exactly 13.8 volts. Since moving I have lost the
> article in the shuffle and would really appreciate if someone could give
> some help on finding this schematic.
>
> Thank,
>
> Larry
>
> lweaver at yahoo.com
Hello,
You can go to website for Fairchild semi or On semi and find the spec.
But TO220 package, you will see the left pin is input and middle pin
is ground and right pin is for output. Insert any silicon diode like
1N4001 series between Pin 2 and ground and keep the cathode side (
where the band is marked)
to the ground side, this will raise 0.6V or so.
But if you use more than 1A, you had better try LDO. (Low voltage
drop regulators) LM7812 need at least 4V head room voltage so if you
draw 1A, you are talking about 4W dissipation in that IC. But if your
can maintain input voltage to 14.8V or so then voltage drop using LDO
will be less than 1V so the total dissipation on that rgulator is 1W,
much cooler and need small heat sink.
There are 3A versions available in that same package. Go to On semi
website or National semi and look for LDO. You can find adjustable
type as well.
Good luck. YOU can get some samples from them at free of charge.
Young Kim
K6hm

1025. FA: Oscilloscope starting at $10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 02:44:29 UTC
From: Tazanator <Tazanator1@hotmail.com>
Message-ID: <ha_0a.23577$2H6.629@sccrnsc04>
Source record: 37978

Phillips PM3200 oscilloscope
Item # 2507005797

thanks for looking ... and yes it works.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4677&item=2507005797&
rd=1

1026. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 13:10:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <el71a.27267$rq4.2009378@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37979

Are you sure that's the only effect of "distancing" the ground?

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v48k9mhv4afhf3@corp.supernews.com...
> Three diodes will cause the output vary with temperature at the rate of
> about minus 6 - 7 mV per degree C, if that matters.
>
> Roy Lewallen, W7EL

1027. Re: Need coil form

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 13:36:47 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <g_icnfGcvJ7nldijXTWcqg@comcast.com>
Source record: 37980

why not get a 3/8 inch dowel at home depot, wrap some kraft paper around it, seal the edge with tape...etc, etc.remove dowel voila!

"SAM" <jcplpsm@aol.communicate> wrote in message news:20030207114032.08918.00000244@mb-cg.aol.com...
> Does anyone have a good source for coil forms? T have tried all my usual
> sources, AES, Dicks, etc. I need a form that is 2 3/4" long with an inside
> diameter of 3/8". The outside diameter can't be more than 9/16", as this is
> the needed dimension, but can be smaller. I can always build it up. The
> original form is phenolic, but I believe paper will do fine. The inside
> diameter is critical as it is slug tuned.
>
> Thanks for any suggestions in advance.
>
> Scott M.
> WN1B
>

1028. Re: Looking for website, TV tuner modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 13:40:06 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <GZ2dnYIvQ_ndlNijXTWcoA@comcast.com>
Source record: 37982

The UHF section of old tuners is more interesting.

"PaoloC" <fake.address@asdrubale.net> wrote in message
news:3e43acb8$1@news.opennet.it...
> Hi.
> I remember reading either on this newsgroup or on some QRP list about a
> modification to transform a TV tuner into a 6m (broadband) antenna
> preamplifier.
>
> I just ran across one of those modules, but unfortunately I can't remember
> the website with the article. Can anyone help?
>
> Thanks!
> Paolo
>
>

1029. What is polarity on HI-Q 4:1 balun?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 13:40:47 UTC
From: shane0319@hotmail.com
Message-ID: <5e60425.0302080540.16564cde@posting.google.com>
Source record: 37981

Thank you for reading my msg!

I am building a HB windom antenna according to:
http://www.packetradio.com/windom.htm

According to the diagram I need to connect the short leg to NEG ang
long leg to POS. I just recd the HI-Q 4:1 and there is no
documentation on which side is what. Ohming is not on option, due to
being DC grounded.
The instructions in the HI-Q say, "Do NOT disassemble the HI-Q Balun.
Once any of the hooks are disassembled, the balun can not be
reassembled."
Plus the PVC is glued well.

Thank you for the help!

Shane N0ZDI

1030. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 15:43:05 UTC
From: Lasse <no_email@today.sri>
Message-ID: <5v8a4vcjp99slmtt66581hhi3bd6eupiv5@4ax.com>
Source record: 37983

I remember seeing an article stating that raisng the ground reference
using diodes could lead to disasterous results if a short should
occure i.e short circuit of internal pass transistor and leading to
full unregulated voltage at output. Not sure if it was a specific
brand of 7812.

Why not use an adjustable chip like LM317?

If you want to use diodes, make sure there is enough bias currect, to
get the wanted voltage. And make an acid test, short the output before
using the p.s.

Cheers
Lasse SM5GLC

On Fri, 07 Feb 2003 16:36:59 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Three diodes will cause the output vary with temperature at the rate of
>about minus 6 - 7 mV per degree C, if that matters.
>
>Roy Lewallen, W7EL
>
>Brian Griffey wrote:
>> At the sacrafice of regulation...
>>
>> --
>> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>> Brian Griffey
>> See the SkyWave Linear Amplifier at
>> http://home.att.net/~briangriffey/Index.html
>> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>>
>>
>> "Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
>> news:v488572gaat062@corp.supernews.com...
>>
>>>The schematic is easy - just put the string of diodes between ground
>>>and the common lead of the LM7812, with the cathode ends towards
>>>ground. Three silicon diodes will give about 0.6 x 3 or a 1.8 volt
>>>increase in the output.
>>>
>>>
>>
>>
>>

1031. SlideRule Receiver Cum Capacitance Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 20:13:23 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <b23ocq$5ej$1@newsg3.svr.pol.co.uk>
Source record: 37984
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Simple but sensitive 2 transistor Headphone Receiver
With optional 1 Transistor L/S Amp..
Long Medium & trawler Band.
Also measures capacitance from 1pf to 5000pf.
Full constructional article now on the website (May 1975)
(The Ingenious Circuits of Sir Douglas Hall)
http://www.spontaflex.freeserve.co.uk/

Geoff

1032. Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 21:31:42 UTC
From: Mikey <mikey@yahoo.com>
Message-ID: <2He1a.34719$2H6.1152@sccrnsc04>
Source record: 37985

Hi,

Is there a shop near Boston for repairing my Tektronix 465B scope at a reasonable price. Thanks.

-Mikey

1033. WTB: KIM-1 Kimsi Motherboard (S-100)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 21:32:43 UTC
From: Alan <adiaz224@earthlink.net>
Message-ID: <%He1a.6609$tO2.632950@newsread1.prod.itd.earthlink.net>
Source record: 37986
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I'm looking for an S-100 Kimsi Motherboard that enables a KIM-1 to be expanded using S-100 boards. Please email me directly if you have one or something similar. Thanks.
Alan

1034. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 21:49:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4aurpntncsib8@corp.supernews.com>
Source record: 37987

There used to be a Tektronix field office there which could do the work. If they're still there and would do the work for what you'd consider a reasonable price, I don't know, but it wouldn't take long to find out.

Roy Lewallen, W7EL

Mikey wrote:
> Hi,
>
> Is there a shop near Boston for repairing my Tektronix 465B scope at a
> reasonable price. Thanks.
>
> -Mikey
>
>

1035. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 23:02:34 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e458c7d@news.alphalink.com.au>
Source record: 37988

"Jim Adney" <jadney@vwtype3.org> wrote in message

> OTOH, I have no idea where one might find a 2000 ohm speaker. 2000 ohm
> headphones used to be available and this was what was commonly used in
> crystal sets.

A crystal earpiece would be OK, but you may need to put a 100k resistor
across it. Or if you're really desperate, a piezo transducer will also work
(though the recovered audio will be poor).

Unless you're really close to the transmitter or have a very efficient
antenna you will not drive a speaker with a simple crystal set unless it's
followed by an amplifer stage.

Peter VK3YE

1036. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-08 23:08:40 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e458e06@news.alphalink.com.au>
Source record: 37989

"cornytheclown" <cornytheclown@hotmail.com> wrote in message
news:8e8f59d4.0301311459.1b26ae33@posting.google.com...

> also unless you are trying to build a pure crystal set I would add a
> stage of audio amplication even with the high impedance phones.

I would go further and build a 2 transistor regenerative set. If adding a
transistor
amplifier doubles the performance of the crystal set, making it regenerative
will
increase it 100 fold. You will be able to drive a speaker on local stations
and
get interstate stations at night.

See http://www.alphalink.com.au/~parkerp/nonov99.htm

1037. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 00:16:44 UTC
From: jgboyles@aol.com
Message-ID: <20030208191644.05666.00000636@mb-mh.aol.com>
Source record: 37990

>I remember seeing an article stating that raisng the ground reference
>using diodes could lead to disasterous results

I have done this many times without any disasterous results.

>if a short should
>occure i.e short circuit of internal pass transistor and leading to
>full unregulated voltage at output.

This is a disaster, but I have never caused it in my experience by raising the ground reference.
I have used a 7805 and a 6 volt zener + diode and got close to a 7812. Worked fine for me. The reason I used this odd combination is because that is what I had.

>If you want to use diodes, make sure there is enough bias currect, to
>get the wanted voltage. And make an acid test, short the output before
>using the p.s.

The regulation may not be as stiff, but it will work, and no don't short the output. I have never done that. If you are sending this up in the Space Shuttle, maybe do that before launch, but for Amateur use don't bother.

73 Gary N4AST

1038. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 00:38:30 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E45A306.B1FDB3C@ieee.org>
Source record: 37991

JGBOYLES wrote:

> >I remember seeing an article stating that raisng the ground reference
> >using diodes could lead to disasterous results
>
> I have done this many times without any disasterous results.
>
> >if a short should
> >occure i.e short circuit of internal pass transistor and leading to
> >full unregulated voltage at output.

My experience with the "full unregulated. voltage on output" was when the input voltage
fell to zero (short on input) and the large output capacitor put a reverse voltage

on the internal pass transistor. That resulted in the unregulated. input being passed through
to the output.

Other wise I have used the diode trick a couple of times with good results.

Bill K7NOM

>
>
> This is a disaster, but I have never caused it in my experience by raising the
> ground reference.
> I have used a 7805 and a 6 volt zener + diode and got close to a 7812. Worked
> fine for me. The reason I used this odd combination is because that is what I
> had.
>
> >If you want to use diodes, make sure there is enough bias currect, to
> >get the wanted voltage. And make an acid test, short the output before
> >using the p.s.
>
> The regulation may not be as stiff, but it will work, and no don't short the
> output. I have never done that. If you are sending this up in the Space
> Shuttle, maybe do that before launch, but for Amateur use don't bother.
>
> 73 Gary N4AST

1039. Re: KIM-1 Kimsi Motherboard (S-100)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 01:36:13 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <hgi1a.6187$q91.842539@news2.west.cox.net>
Source record: 37992
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Alan" <adiaz224@earthlink.net> wrote in message
news:%He1a.6609$tO2.632950@newsread1.prod.itd.earthlink.net...
> I'm looking for an S-100 Kimsi Motherboard that enables a KIM-1 to be
> expanded using S-100 boards. Please email me directly if you have one or
> something similar. Thanks.
> Alan
>
>

You might also look for a product called the Betsi. This was a motherboard, originally intended for the Commodore Pet, which provided for S-100 expansion. The name was changed from Petsi to Betsi due to legal pressure from Commodore. IIRC, the KIM has the same parallel port as the Pet.

Ed

1040. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 03:35:43 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18af6c6d9351d6f698974e@192.168.42.131>
Source record: 37993

In article <v4aurpntncsib8@corp.supernews.com>, w7el@eznec.com says...

> There used to be a Tektronix field office there which could do the work.
> If they're still there and would do the work for what you'd consider a
> reasonable price, I don't know, but it wouldn't take long to find out.

I would add to this the caution that Tektronix discontinued their
entire analog 'scope line in January of 2000, and that they seem bound
and determined to wipe out all traces of support for anything over a
couple of years old.

They have, unfortunately, mutated from a company that was built by
and for engineers and techs into Just Another Money-Grubbing Dot-Bomb.
Whether this degrading contamination has affected all of their repair
stations remains to be seen, but don't be in the least surprised if they
try to convince you to buy one of their new offshore-crap 'scopes instead
of fixing your 465B.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1041. Anyone have an SDK-85 or 86 to sell cheap?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 05:55:08 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E45ED3C.42E02A31@bloomer.net>
Source record: 37994

Looking for the single board SDK-85 computer trainer. Used an 8085 CPU.
The SDK-86 used the 8086 and this would be acceptable as well. Working
preferred, unless you have a manual, then repairable one is OK too!

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1042. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 07:27:37 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <toub4v8h5v175vki304kmun9vl45gcle77@4ax.com>
Source record: 37996

On Sun, 9 Feb 2003 10:02:34 +1100, "Peter Parker"
<parkerp@NOSPAMalphalink.com.au> opined thusly:

>Unless you're really close to the transmitter or have a very efficient
>antenna you will not drive a speaker with a simple crystal set unless it's
>followed by an amplifer stage.

Indeed. Those microvolts don't stretch very far!
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1043. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 07:27:38 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <4rub4vckhr1v9mlh46j5t5g555rev3sgke@4ax.com>
Source record: 37847

On Sun, 9 Feb 2003 10:08:40 +1100, "Peter Parker"
<parkerp@NOSPAMalphalink.com.au> opined thusly:

>
>"cornytheclown" <cornytheclown@hotmail.com> wrote in message
>news:8e8f59d4.0301311459.1b26ae33@posting.google.com...
>
>> also unless you are trying to build a pure crystal set I would add a
>> stage of audio amplication even with the high impedance phones.
>
>I would go further and build a 2 transistor regenerative set. If adding a
>transistor
>amplifier doubles the performance of the crystal set, making it regenerative
>will
>increase it 100 fold. You will be able to drive a speaker on local stations
>and
>get interstate stations at night.

Any self-respecting vintage radio purist would blanche at such a
suggestion. One assumes the OP was keen to stick to the traditional
set-up. If you're going to start adding externally-powered refinements
you kiss goodbye to that spirit. He might as well go off and build
himself a PLL-controlled triple-conversion superhet!
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1044. Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 10:12:12 UTC
From: on4ja <wbac3361@wanadoo.be>
Message-ID: <b259kd$137q1$2@sinclair.be.wanadoo.com>
Source record: 37995

I'd like to know your opinion about amplifiers sold in
kit by CCI Communication Conccept EB 104 CK
AR 347 CK AR 313 CK .

Many thanks ,
Emil on4ja@wanadoo.be

1045. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 14:19:47 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v4cosbi9ch9od6@corp.supernews.com>
Source record: 37848

> One assumes the OP was keen to stick to the traditional set-up.

Then I submit that he should stick with headphones rather than a
speaker :-)

1046. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 14:27:12 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v4cpa8ggvlicdc@corp.supernews.com>
Source record: 37849

The op notes on most of these devices recommend using a diode from input to output in order to guard against shorting the internal pass transistor when the input drops to zero and the output has large capacitors across it. Few designers appear to use this diode.

1047. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 16:41:48 UTC
From: W7TI <jamspam@upyours.now>
Message-ID: <Xns931D58779672Bpookster@216.168.3.50>
Source record: 37850

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:toub4v8h5v175vki304kmun9vl45gcle77@4ax.com:

>>Unless you're really close to the transmitter or have a very efficient
>>antenna you will not drive a speaker with a simple crystal set unless
>>it's followed by an amplifer stage.
>
> Indeed. Those microvolts don't stretch very far!
>

You might be surprized how small a signal the human ear can preceive from a speaker. I once did some tests with a carefully measured sine wave into an ordinary speaker. One milliwatt was clearly audible and only when down into the microwatts did the tone disappear. Try it, you might be amazed.

Bill, W7TI

1048. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 17:45:07 UTC
From: bowman <bowman@montana.com>
Message-ID: <b263qr$18ujb2$2@ID-159066.news.dfncis.de>
Source record: 37851

Paul Burridge wrote:

> Any self-respecting vintage radio purist would blanche at such a
> suggestion. One assumes the OP was keen to stick to the traditional
> set-up.

Regens are rather vintage, too. After using one for a while, one is grateful Armstrong went on to the next step. It is interesting to work your way through radio history. Phylogeny recaptitulates ontogeny or something.

1049. Re: Icom BP- battery packs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 19:43:32 UTC
From: David Harmon <source@netcom.com>
Message-ID: <3e51af22.153428380@newstest2.earthlink.net>
Source record: 37852

On Sat, 01 Feb 2003 19:54:18 GMT in rec.radio.amateur.homebrew,
Gary P. Fiber <foo@bar.invalid> wrote:

>Hope some of this helps you.

Oh yes, this clears up many things. Thank you for searching your memory
for me.

>It seems to me the most rapid charge is about 600 mA I forget what the
>center switch charge rate is though. The trickle charge rate was 25
>Ma. On the BP-4 battery pack you will not find a charge rate plate.
>You can determine which switch is pressed as that position will not
>have the hole in the plate.

So I understand from this that the switches are for charge rate, and only
one of them should normally be depressed at a time. And that they are
high, medium, and low rate from left to right.

BP-4 has no glued plate, but it has equivalent molded directly in and it
operates the center switch. Rapid charge BP-5 uses the left switch and
slow charge BP-3 the one on the right.

I should ask Icom for the service info.

>The rapid charge BP series ie: BP-5, BP-7, BP-8 all are controlled by
>temperature.
...
>The BC-35 has no way of measuring the battery voltage to control the
>charging.
...
>The BP-3 is trickle charge only, charges at 25 mA and does not shut
>off when it reaches full charge. It has no thermo cutout.

I never did know why the BP-5 would stop automatically and the BP-3 would
not, but yes, the temp rise idea would not work so well for slow charging.

1050. Re: Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 20:06:40 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E46B4D0.8A82BD9A@sympatico.ca>
Source record: 37853

I have the EB104 kit. Looks like a nice little amp but keep in mind
several things:

- I think the intermod performance is a tad low but still usable.
- this is just the amp board but since it is 600 W out you need to
develop
- TR switching
- SWR protection - transistors are 250 US per 4.
- you need good thermal protection. Recommend the copper plate heat
spreader
but you will need to smooth out the surface. Mine had scratch, bumps
and would
not sit flat on a heat sink until I sanded down the edges.
- you will need a wopper of a heat sink and probably some fan cooling
- you also need to get a 20 Amp 40 - 50 V power supply for this.

- drive level is around 5 Watts. If you are driving it with a 100W rig
you need to
1) turn the power down
2) put in some input power protection incase you forget 1)
3) develop some high power attenuators. Ohmite makes some inexpensive
35 W
power resistors in a T220 package which should do the trick.

- you will of course need high power harmonic filters. CCI has some of
these.

You should check the Philip's power amplifier ap notes for performance
comparison
e.g. IP3. also check the Ameriton amplifiers. They have a 4 MRF150 amp
as well.
Maybe you could just get their power supply if you want to build the
EB104.

Good luck. Let me know how things go.

Bill Kirkland
VE3JHU

on4ja wrote:

> I'd like to know your opinion about amplifiers sold in
> kit by CCI Communication Conccept EB 104 CK
> AR 347 CK AR 313 CK .
>
> Many thanks ,
> Emil on4ja@wanadoo.be

1051. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 20:20:32 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3E46B810.A814EF73@sympatico.ca>
Source record: 37854

At one time Temex took my small order.

http://www.temex-components.com/temex/catalog/hfilgal_010220.pdf

Mike W wrote:

> On Tue, 04 Feb 2003 03:44:04 GMT, Bill Beal <bbeal@hilcozap.net>
> wrote:
>
> >I am looking at building a simple all-band receiver. After going
> >through a lot of the litature, I belive a first IF around 70 MHz would
> >be a good candidate with a second conversion to a more resonable IF
> >frequency (455 KHz to a few MHz). I have looked but not found a source
> >for crystal filters at around 70 MHz. Preferably 8 poles with about a
> >15 KHz bandwidth is my desired goal. Does anybody sell these in small
> >quantities (lots of 1) at a reasonable price (not the price of a top
> >notch IF filter as for some of the commercial rigs)?
> >
> Bill, Barend in Holland have some surplus Hi Mhz filters that may do
> the job, quite cheap too.
> look here
> http://www.barendh.com
>
> hth Mike W

1052. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 21:02:21 UTC
From: averyfineman@aol.com
Message-ID: <20030209160221.16280.00001788@mb-mo.aol.com>
Source record: 37855

In article <Xns931D58779672Bpookster@216.168.3.50>, W7TI <jamspam@upyours.now>
writes:

>Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
>news:toub4v8h5v175vki304kmun9vl45gcle77@4ax.com:
>
>>>Unless you're really close to the transmitter or have a very efficient
>>>antenna you will not drive a speaker with a simple crystal set unless
>>>it's followed by an amplifer stage.
>>
>> Indeed. Those microvolts don't stretch very far!
>____
>
>You might be surprized how small a signal the human ear can preceive from
>a speaker. I once did some tests with a carefully measured sine wave
>into an ordinary speaker. One milliwatt was clearly audible and only
>when down into the microwatts did the tone disappear. Try it, you might
>be amazed.
>
>Bill, W7TI

A "standard test tone" in telephony a half century ago was
the "Volume Unit" given in decibels based on 1.0 mW into
a 600 Ohm characteristic impedance line. With a military
version of Trimm 2000 Ohm headphones peaking in
response at about 1 KHz, that single little milliWatt was
quite uncomfortable to hear for more than a few seconds.

With all 24 channels of a microwave radio relay terminal
set for nominal maximum of 0 VU, we could just barely
sense random channel noise at 40 db down from 0 VU...if
the rest of the terminal room was quiet (nine terminals all
told, only two very small squirrel cage blowers in each
terminal). Barely perceptible noise to young ears. :-)

What has been slightly overlooked is the efficiency of
close-coupling any headphones to the ear...much higher
than speakers...unless the speakers are used AS
headphones (somewhat of a danger there with ordinary
tube/transistor radios).

E = Square-root (P * R). If 2000 Ohm headphones get
a microwatt of audio, the voltage across the phones is
44.7 mV. If the diode detector is 50% efficient and AM
input signals are at peak modulation, the antenna
voltage would be the same 44.7 mV, a fairly strong

signal. [just an approximation, not absolute]

The most recent Mouser catalog shows crystal ear-
phones with impedances of several MegOhms (!).
[www.mouser.com] Cheap at $1.85 to $2.03 each
made by Kobitone. Adding diodes to form a voltage
doubler, tripler, etc., would possibly increase the
earphone level. Those very high-Z earphones take
low current and would fit the voltage multiplier low-
current requirements. Just a thought...

Len Anderson
retired (from regular hours) electronic engineer person

1053. Icom IC-T8 External Speaker / Mic connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 21:21:39 UTC
From: John Mortlock <abuse@global.freeserve.co.uk>
Message-ID: <b26gnv$2a5$1@news6.svr.pol.co.uk>
Source record: 37856

Can someone tell me the connections for the external speaker / mic for the
IC-T8

There is one 2.5 mm jack and one 3.5 mm jack on the radio.
I am not sure if the plugs need to be the stereo or mono type.

my return address is correct.

Thanks

1054. Re: Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 21:36:46 UTC
From: jgboyles@aol.com
Message-ID: <20030209163646.05111.00000621@mb-cn.aol.com>
Source record: 37857

>I have the EB104 kit. Looks like a nice little amp but keep in mind
>several things:

I ditto everything Bill said. I got 2 of the EB104 boards and homebrewed power splitters and combiners for a 1200 watt amp. I think this is equivalent to the Yeasu solid state amp that uses the 8 MRF150s. I currently have band switched LPF for 160, 80 and 40m. The amp works fine, and as near as I can tell I get 1200 watts pep into a 50 ohm load.
I built the 50v 40 amp linear supply from the junkbox. It is rather massive. In the future I am either building a SMPS or try to find one surplus. I noticed Fair Radio has one for around $100, but the shipping weight is 100lbs. The EB104 is a good starting point, but to have an amplifier that you can safely use with a 100 watt transceiver requires a LOT more circuitry and expense.
73 Gary N4AST

1055. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-09 21:53:14 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931D8D4504F38pookster@216.168.3.50>
Source record: 37858

averyfineman@aol.com (Avery Fineman) wrote in
news:20030209160221.16280.00001788@mb-mo.aol.com:

> Those very high-Z earphones take
> low current and would fit the voltage multiplier low-
> current requirements. Just a thought...
>

Remeber that with low current comes the requirement for high voltage
(relatively speaking). Like they taught us in Electronics 101, maximum
power transfer occurs when source impedance = load impedance.

So what is the source impedance of a crystal set? Anyone know?

--
Bill, W7TI

1056. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 00:39:21 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <7fub4v4q4ahrmv96fa638be4htqc77dbdi@4ax.com>
Source record: 37859

On Sat, 08 Feb 2003 21:31:42 GMT "Mikey" <mikey@yahoo.com> wrote:

>Is there a shop near Boston for repairing my Tektronix 465B scope at a
>reasonable price.

The 465B was one of Tek's best scopes ever. Have you considered
getting a service manual and fixing it yourself? If you use and
understand a scope, you can probably also fix it, with the help of the
manual.

There's also plenty of good help available on the newsgroups.
Sci.electronics.repair would be the best place to ask.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

1057. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 00:55:50 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931DAC3AC662Apookster@216.168.3.50>
Source record: 37860

Jim Adney <jadney@vwtype3.org> wrote in
news:7fub4v4q4ahrmv96fa638be4htqc77dbdi@4ax.com:

> The 465B was one of Tek's best scopes ever. Have you considered
> getting a service manual and fixing it yourself? If you use and
> understand a scope, you can probably also fix it, with the help of the
> manual.
>

I worked for three years on the 465 and 465B production line at Tektronix
calibrating and repairing. I would recommend do-it-yourself for VERY
experienced techs only. Especially don't mess with the adjustments for
gain compensation. You'll never get it back right without some rather
expensive test equipment.

--
Bill, W7TI

1058. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 02:52:21 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <b2748bhss1@news.utelfla.com>
Source record: 37861

> Is there a shop near Boston for repairing my Tektronix 465B scope at a
> reasonable price. Thanks.

You might try looking into these places:

Melrose
http://www.testequipmentdepot.com/repair.htm

Billerica
http://www.simco.com/boston.html

Also, you might try contacting these folks and see if they have any
suggestions:

Bill and Stan's Tektronix Resource Site
http://www.reprise.com/host/tektronix/home/

1059. Re: HP 200CD ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 04:03:35 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v4e91glk824e6e@corp.supernews.com>
Source record: 37862

I thought that the HP200 (tubes and a lamp in the feedback) was what started the company. I tested one at Ohio State for use as a very low frequency LO over 40 years ago and remember that its frequency was very stable and clean.
I do not think that the use of tubes in the HP200 has anything to do with "tube sound." 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

... The tube versions are preferred by
> those audio fanatics who are into the "tube sound" anyway.
> dr
>

1060. LCD Works(?) with no VSS connection

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 04:20:12 UTC
From: cooperjim@aol.com
Message-ID: <20030209232012.20699.00000424@mb-fq.aol.com>
Source record: 37864

Hi All

I bought a cheap surplus 4x20 LCD display last summer. While it worked reliably, it had miserable contrast and poor viewing angle. I thought that was the reason it was surplus and cheap and did not follow up hi hi.

I just found that my VSS wire connection to the display was broken (bad Jim) and when I connected it, the display started to perform very well.

The return apparently was taking a circuitous path through the contrast line (which I had connected properly).

So, if you have a display that "almost" works, check the VSS connection.

73
Jim Cooper NE6O

1061. Still need SP-600 transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 04:20:32 UTC
From: Jeff Lynch <wa1vqy@cox.net>
Message-ID: <kMF1a.18877$tQ1.1307960@news2.east.cox.net>
Source record: 37863

Hello Everyone, I'm still looking for a power transformer for a Hammarlund SP-600. If anyone has one in their parts box they want to part with, please let me know what you want for it. Thanks & 73 de Jeff WA1VQY@COX.NET

1062. Re: Icom BP- battery packs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 11:09:46 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <4PL1a.262$YF2.50853@newsfep1-win.server.ntli.net>
Source record: 37865

> >It seems to me the most rapid charge is about 600 mA I forget what the
> >center switch charge rate is though. The trickle charge rate was 25
> >Ma. On the BP-4 battery pack you will not find a charge rate plate.
> >You can determine which switch is pressed as that position will not
> >have the hole in the plate.
>
> So I understand from this that the switches are for charge rate, and only
> one of them should normally be depressed at a time. And that they are
> high, medium, and low rate from left to right.
>
> BP-4 has no glued plate, but it has equivalent molded directly in and it
> operates the center switch. Rapid charge BP-5 uses the left switch and
> slow charge BP-3 the one on the right.
==========
You might wish to consider the MAHA -C777 Plus automatic universal charger /conditioner which charges any Nicad or NiMH cell or pack up to 14.4V ,even Lithium -ion cells.
The unit analyses/conditions/charges any shape of battery ,also those used for model racing cars ,mobile phones ,video cameras etc. I use both the above model as well as the older version (without display unit) and am very pleased with both .
Note : I have no other connection with MAHA Energy Inc other than being a satisfied customer.

Frank gm0csz.kn6wh@ntlworld.com

1063. Re: Looking for website, TV tuner modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 12:55:01 UTC
From: PaoloC <fake.address@asdrubale.net>
Message-ID: <3e47a0a8$1@news.opennet.it>
Source record: 37866

"john walton" <jdwalton@comcast.net> ha scritto nel messaggio
news:GZ2dnYIvQ_ndlNijXTWcoA@comcast.com...

Hi!
Altought Michael has pointed me to the website I was looking for...

> The UHF section of old tuners is more interesting.

I would be interested to hear some details about re-using the UHF section of
a TV tuner!!
John, can you address me to some webpages with more info?! Or any other
reference would do!

TIA,
Paolo ik1zyw

1064. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 15:05:29 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0302100705.487add35@posting.google.com>
Source record: 37867
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"FM" <radiovintage@hotmail.com> wrote in message
news:<0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.

I stopped re-crystalling elements and started using Channel Element
Headquarters (http://home.fuse.net/cehinc/). This is a clearing house
of used elements.

1065. FS: NIXIE Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 17:08:23 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <b0R1a.25052$LW1.1181545@news1.west.cox.net>
Source record: 37868
Cross-posted to:
alt.ham-radio.marketplace,misc.industry.electronics.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list.

1066. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 17:51:57 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <siof4v8k1plss5mhcf1890fadsn0uvjnp2@4ax.com>
Source record: 37875

On Mon, 10 Feb 2003 00:55:50 -0000, "Bill, W7TI" <jamspam@upyours.now>
opined thusly:

>Jim Adney <jadney@vwtype3.org> wrote in
>news:7fub4v4q4ahrmv96fa638be4htqc77dbdi@4ax.com:
>
>> The 465B was one of Tek's best scopes ever. Have you considered
>> getting a service manual and fixing it yourself? If you use and
>> understand a scope, you can probably also fix it, with the help of the
>> manual.
>>
>>____
>
>I worked for three years on the 465 and 465B production line at Tektronix
>calibrating and repairing. I would recommend do-it-yourself for VERY
>experienced techs only. Especially don't mess with the adjustments for
>gain compensation. You'll never get it back right without some rather
>expensive test equipment.

Is this the scope that's first class until some gold-plating wears off
somewhere and you just have to junk it? Sounds a terrible waste, but I
gather there's nothing one can do about it.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1067. Re: Jelly bean opamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 19:27:13 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <t1vf4vsrj14ojgo687n863f9ftafpbr9q2@4ax.com>
Source record: 37869
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Understood and empathized. I tried getting away from the "packaged" audio amplifiers for speaker and phones in my products because at some time in the future even the venerable LM386 is going to be history. (Did I hear somebody say "The 6V6 will never die."?)

Put an LM324 inside a feedback loop of the usual comp-symm 3-transistor output stage and simulated it, just not far enough in frequency. The hardware breadboard sang like a bird at about 800 kHz. and I had only simulated it to 500 kHz. Bit in the butt again.

Jim

"Walter Harley" <walterh@cafewalter.com>
shared these priceless pearls of wisdom:

->"Winfield Hill" <whill@picovolt.com> wrote in message
->news:b1gtq402qtt@drn.newsguy.com...
->> Actually, perhaps I should take the jellybean bit back. The
->> LMC6482, like all rail-to-rail output opamps, suffers from
->> high open-loop output impedance, which makes it harder to use
->> with capacitive loads.
->
->Second that motion. Wasted a lot of time over the weekend trying to control
->an LMC662.

1068. Re: Icom IC-T8 External Speaker / Mic connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 21:27:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302101327.47cc9eb6@posting.google.com>
Source record: 37870

"John Mortlock" <abuse@global.freeserve.co.uk> wrote in message
news:<b26gnv$2a5$1@news6.svr.pol.co.uk>...
> Can someone tell me the connections for the external speaker / mic for the
> IC-T8
>
> There is one 2.5 mm jack and one 3.5 mm jack on the radio.
> I am not sure if the plugs need to be the stereo or mono type.
>
> my return address is correct.
>
> Thanks
I'm not familiar with that radio, but if it's like most, the plugs are
mono. One for the speaker, and one for the mike. The switching is done
on the same "hot" mike line, and is isolated by a resister usually.
There is no separate "switching " line as there is in many larger
radios. MK

1069. Re: Icom IC-T8 External Speaker / Mic connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 21:35:14 UTC
From: John Mortlock <abuse@global.freeserve.co.uk>
Message-ID: <b295to$43p$1@news8.svr.pol.co.uk>
Source record: 37871

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0302101327.47cc9eb6@posting.google.com...
> "John Mortlock" <abuse@global.freeserve.co.uk> wrote in message
news:<b26gnv$2a5$1@news6.svr.pol.co.uk>...
> > Can someone tell me the connections for the external speaker / mic for
the
> > IC-T8
> >
> > There is one 2.5 mm jack and one 3.5 mm jack on the radio.
> > I am not sure if the plugs need to be the stereo or mono type.
> >
> > my return address is correct.
> >
> > Thanks
> I'm not familiar with that radio, but if it's like most, the plugs are
> mono. One for the speaker, and one for the mike. The switching is done
> on the same "hot" mike line, and is isolated by a resister usually.
> There is no separate "switching " line as there is in many larger
> radios. MK

Thanks for the info... will try it out.

1070. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 22:16:05 UTC
From: "c.wright" <c.wright@auckland.ac.nz>
Message-ID: <3E4824A5.BA8A7776@auckland.ac.nz>
Source record: 37872

Doug wrote:

> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug

G'day

What you need Doug is an old speaker transformer from a tube radio. These are typically designed to convert the 5000 ohms or so plate circuit impedance to match a 3 or 8 ohm speaker. If you wire the High resistance winding of the transformer where the Hi impedance phones went and wire the speaker across the low resistance winding you can get surprisingly good results. I still have a crystal set the when used with a very high efficiency 5" speaker gave quite audible results in a quiet workshop when used with a 30 Ft antenna and from a local station running 50 Kw about 10 miles away. It is very important that the sets coils are accurately matched to the load of the antenna and the detector circuit. This is where the use of multi tapped coils where everything can be adjusted for best results.
Look up some of the more complex Xtal sets that have adjustable coils on the net and you'll see just what I mean.
Of course unless the station is next door you won't get really worthwhile volume.
Regards Cliff Wright ZL1BDA ex G3NIA.

1071. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 23:15:38 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <FgW1a.18285$oc.7841@fe01.atl2.webusenet.com>
Source record: 37873
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

There is (was?) an outfit named NKX, that provided REBUILT channel elements for about, as i remember, 35 bucks a piece. a good place to look for old elements is on ebay. but, with the MSR-2000, this radio in new enuff that may not be many surplus to be had. another good place (and still in business) is International crystal- tho dont know their prices, but should be able to find their web site. also, kxn 1086/ 88 sounds like maybe used by other motorola radios, but been too long ago since was full-blown radioman--- jim nn7k

"Derrick wrote:> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having purchased crystals in many years where is the best place to buy them ?? We
> > will be using the repeater on 146.01/61.Also is there a site with the specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.
>

1072. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 23:33:37 UTC
From: Rich Osman <Rich@osman.com>
Message-ID: <3E4836D1.1040209@osman.com>
Source record: 37874
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FM wrote:
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.

I'm not certian, but I beleive these are the same element used in the
Mitrek mobile, making them fairly common.

--
mailto:Rich@Osman.com http://www.rich.osman.com
Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ

If you receive something that says "Send this to everyone you know,"
PLEASE pretend you don't know me.

1073. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-10 23:58:22 UTC
From: vpatron@hotmail.com
Message-ID: <857c381b.0302101558.3bb1762b@posting.google.com>
Source record: 37876

Hi Dwight,

Besides the 60Hz vs 50 Hz filtering that Roy mentioned, another thing to consider is that since your transformer specifically says 60 Hz, it has a bit less inductance (in other words, turns of wire) and a bit lower saturation (roughly, mass of iron) than one designed for 50 Hz. The 50 Hz transformers generally say "50/60 Hz".

Even if you transform the 220 to 110V, the subwoofer's transformer would probably run hot. It will *definitely* be hotter than at 60 Hz, just how hot you'll have to see.

Another idea: instead of building a switcher, buy a big 12V power supply, like a 13.8V 25A (if you need say 300W) that runs off 220V. This might run you at least $100. Too bad the $60 RadioShack sale one is only 110V. A switching supply would be more efficient, smaller, lighter, cooler. Then use an off-the-shelf 12V to 110V converter. These run around $60 for a 300W one these days and can be found at any *mart store. You may need some LC filtering since the pseudo-sine wave output has sharp edges and may cause hum, but may not be required depending on how well your sub is designed. The fan might annoy you but is needed at high power.

Yet another idea would be to buy the same transformer and put the two in series. Make sure the phase is correct.

Boy, this subwoofer must be so special that you can't just buy another one... :-)

Regards,

-Vince

Dwight Stewart <stewart@say.net> wrote in message news:<BA68C87A.DEBD%stewart@say.net>...
> "Dwight Stewart" wrote:
>
> >
> > We're moving to Europe for several years and I'd like to convert a 110v
> > stereo system subwoofer to 110/220v (switchable or auto sensing).
>
>
> Thanks to all that responded so far. What I have now sounds simple enough.
> I need to replace the power transformer with a similar wattage output 220v
> one. The wiring should be very similar to what exists unless I choose a
> 110/220v power transformer. If that is the case, I need to add a switch to
> select the windings based on the voltage used.
>

> Filtering potential hum may be a problem, but Roy suggested some steps I
> could take to prevent this (increasing the value of the filter capacitor or
> adding another capacitor in parallel).
>
> Can anyone think of anything else or add anything to what I already have?
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/

1074. trx qrp kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 00:27:04 UTC
From: "Stef@no" <visenta9@NO_SPAMMINGinwind.it>
Message-ID: <srX1a.218280$AA2.8584395@news2.tin.it>
Source record: 37877

I'm planning to build a kit of HF ssb/cw transceiver.

Elecraft K2 should be the best but is very expensive (tax incl.)
Anyone know a other choice?

I read about Black Forest (much cheaper), any impression?

73s
de Stefano .it

1075. Re: trx qrp kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 00:35:52 UTC
From: "Stef@no" <visenta9@NO_SPAMMINGinwind.it>
Message-ID: <IzX1a.218303$AA2.8585216@news2.tin.it>
Source record: 37878

> I read about Black Forest
http://www.qrpproject.de/black_forest.htm
http://www.qrpproject.de/black_forest_e.htm

1076. Re: Icom IC-T8 External Speaker / Mic connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 01:23:25 UTC
From: vpatron@hotmail.com
Message-ID: <857c381b.0302101723.3ada2a47@posting.google.com>
Source record: 37879

The plugs are mono type. I was going to email you a schematic of the speaker/mic that I have that works on my T7H (and should be same as your IC-T8), but I didn't think your email address is really abuse@global.freeserve.co.uk

You can email me at my call sign at amsat dot org.

-Vince KG6IZL

"John Mortlock" <abuse@global.freeserve.co.uk> wrote in message news:<b26gnv$2a5$1@news6.svr.pol.co.uk>...
> Can someone tell me the connections for the external speaker / mic for the
> IC-T8
>
> There is one 2.5 mm jack and one 3.5 mm jack on the radio.
> I am not sure if the plugs need to be the stereo or mono type.
>
> my return address is correct.
>
> Thanks

1077. Re: Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 01:35:55 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E48537D.99B98CB0@silverstar.com>
Source record: 37880

Rather do scratch-built 12W in 200W out, all-mode, no tune required, operates from 14 MHz to 225 MHz with ONE active component. Fits in case 1" x 1" x 1" not counting carrier operated relay [COR]. PC board set available from F.A.R. Circuits in Dundee, Ill. for 7.95 last set I bought in '97.

1078. how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 01:40:38 UTC
From: aotemp@hotmail.com
Message-ID: <26d721d9.0302101740.765aa95@posting.google.com>
Source record: 37881

Im trying to build a radar system that will detect another device (also to be built by me) within a 1/4 mile radius. I really need some of the smart people's advice and direction as to how to accomplish this.

the device will not be in the air or under water, it will be like a person on land. The radar detector should be able to locate that "person" (to some degree) (I am a software engineer and can interpret the signals if presented properly)...

Thank you so much for your help!

ps. the email is fake, but I will check online messages.

1079. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 01:59:48 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931EB7139D18pookster@216.168.3.50>
Source record: 37882

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:siof4v8k1plss5mhcf1890fadsn0uvjnp2@4ax.com:

> Is this the scope that's first class until some gold-plating wears off
> somewhere and you just have to junk it? Sounds a terrible waste, but I
> gather there's nothing one can do about it.
>

You gather wrong. They used some very tiny little contacts that look like tuning forks about the size of a match head to do the switching in the attenuators and other circuits. The contact pressure is feather light, so gold does not wear off them, they just lose tension or some crud accumulates and they don't make good contact. If you are very, very careful, you can bend them very slightly downward and they will magically work again. It is *real* easy to bend them too far and then you have a problem. Even then it isn't hopeless, just much more difficult.

Tektronix patented the design and it was pretty clever since it eliminated nearly all lead inductance in the switches, but it was indeed finicky. I've been out of the business for a while, but I'm sure modern scopes use solid state switches which should be far more reliable.

The 465 and 465B were at the time the best selling scope in the world and customer loyalty was fantastic. Our customers used to say "I'll buy any brand of scope as long as it's blue and comes from Beaverton, Oregon".

Trivia buffs: How many 465A's were made?
Answer: None. Model numbers went directly from the 465 to the 465B. Even we who worked there never knew why. That's the only Tek scope I know of that skipped a letter like that.

--
Bill, W7TI

1080. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 02:05:54 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v4gmkib59fpt54@corp.supernews.com>
Source record: 37883

A "souped up" Polaroid ultrasonic might do it. Old kits are still available
on ebay from time to time. Passive infrared might also be an avenue.
"x" <aotemp@hotmail.com> wrote in message
news:26d721d9.0302101740.765aa95@posting.google.com...
> Im trying to build a radar system that will detect another device
> (also to be built by me) within a 1/4 mile radius. I really need
> some of the smart people's advice and direction as to how to
> accomplish this.
>
> the device will not be in the air or under water, it will be like a
> person on land. The radar detector should be able to locate that
> "person" (to some degree) (I am a software engineer and can interpret
> the signals if presented properly)...
>
> Thank you so much for your help!
>
> ps. the email is fake, but I will check online messages.

1081. Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 02:41:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3e4861c9.13233516@news.online.no>
Source record: 37885

Put some notes about dip meters on my page
http://www.laud.no/la6nca/la8ak/la8ak/5.htm
will provide some more text later

the site is under reconstruction so you may find the same information
in the different chapters

73,
Jan-Martin
--
remove ,xnd to reply

1082. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 02:42:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4gop2rlm5n01f@corp.supernews.com>
Source record: 37884

I'm the one who brought up the issue of gold plating wearing off 465 switch contacts. On one of Tek's "road shows" -- a scope seminar -- I met some fellows who said that had been the fate of their very heavily used 465, and they were at the seminar to learn what was more currently available. They said that the Tek service center had told them their scope was a goner because the plating was worn off the contacts, which were circuit board traces, and they couldn't be replaced. I recalled that some of the lever switches (for things like AC/DC coupling) on some of Tek's scopes were made by staking a plastic cover over a switch assembly which used heavily gold plated circuit board traces as contacts, and thought that was how some of the 465's switches were made. I have a 455, and the trigger source and coupling switches are constructed that way. On scopes using that type of switch, wearing through the gold plating would constitute an unrepairable problem. Overall, though, the switches were very reliable, and I personally heard only of the one case of wearout.

But Bill has had a good deal of actual experience with 465s and I haven't, so I'll certainly defer to his much greater knowledge of the instrument. If I'm mistaken about the 465 switch construction, I apologize for misleading people. I do know that the 465 established an enviable reputation for reliability, and any wearout mechanism would undoubtedly require a great deal of heavy use. I didn't mean to imply that this is a common problem with the 465 or any other scope -- just that it would be something for a prudent buyer to look for before buying a heavily used instrument, since it would constitute an unrepairable problem.

Roy Lewallen, W7EL

Bill, W7TI wrote:
> Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
> news:siof4v8k1plss5mhcf1890fadsn0uvjnp2@4ax.com:
>
>
>>Is this the scope that's first class until some gold-plating wears off
>>somewhere and you just have to junk it? Sounds a terrible waste, but I
>>gather there's nothing one can do about it.
>>
>
> ____
>
> You gather wrong. They used some very tiny little contacts that look
> like tuning forks about the size of a match head to do the switching in
> the attenuators and other circuits. The contact pressure is feather

> light, so gold does not wear off them, they just lose tension or some
> crud accumulates and they don't make good contact. If you are very, very
> careful, you can bend them very slightly downward and they will magically
> work again. It is *real* easy to bend them too far and then you have a
> problem. Even then it isn't hopeless, just much more difficult.
>
> Tektronix patented the design and it was pretty clever since it
> eliminated nearly all lead inductance in the switches, but it was indeed
> finicky. I've been out of the business for a while, but I'm sure modern
> scopes use solid state switches which should be far more reliable.
>
> The 465 and 465B were at the time the best selling scope in the world and
> customer loyalty was fantastic. Our customers used to say "I'll buy any
> brand of scope as long as it's blue and comes from Beaverton, Oregon".
>
> Trivia buffs: How many 465A's were made?
> Answer: None. Model numbers went directly from the 465 to the 465B.
> Even we who worked there never knew why. That's the only Tek scope I
> know of that skipped a letter like that.
>

1083. Re: HP 200CD ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 02:50:01 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <7mog4voqrlcbom64gin92jpurgplu9gs7f@4ax.com>
Source record: 37886

On Thu, 6 Feb 2003 08:06:57 -0600 "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>Anyone ever converted an HP 200CD to solid state or seen any articles?

I suppose you could do it, but it would be a whole lot of work and
without a LOT of trial and error it probably wouldn't work as well as
the original 200CD design. The 200CD Wein Bridge oscillator is really
quite excellent over its range of operation. There was a reason why HP
marketed these successfully for nearly 30 years.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

1084. FA: Many items...May be of Interest

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 02:50:44 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <HDZ1a.71174$lj.3150965@read1.cgocable.net>
Source record: 37888
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Items you may be interested in !
Thanks for Looking..
73...Norm VE3CZI

_____

Motorola RF Power Sensor 200-550 Mhz 100 W
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4675&item=3006961847&rd=1

Motorola RF Power Sensor 100-250 Mhz 100 W
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4675&item=3006961140&rd=1

GE VHF 100 Watt Commercial Power Amplifier
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4675&item=3006957011&rd=1

Ferritronics FT-128 Tone Decoder/Encoder
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3006952041&rd=1

COMPROD AM / FM Broadcast Antenna Coupler
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=296&item=3006953439&rd=1

1085. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 03:05:35 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931EC23A1C77Epookster@216.168.3.50>
Source record: 37887

Roy Lewallen <w7el@eznec.com> wrote in
news:v4gop2rlm5n01f@corp.supernews.com:

> They said that the Tek service center had told them their
> scope was a goner because the plating was worn off the contacts, which
> were circuit board traces, and they couldn't be replaced.

I don't doubt that was said, but I do doubt if it's really true. Even if the gold plating wore off, there is the base metal under it and contact could still be made if the contact were bent down some more and the surfaces were clean. I suspect the service guys either didn't know the trick or just didn't want to bother. And it is a trick - someone had to show me how to do it. Their approach was most likely to just change the whole assembly, and when those became unavailable due to age, that was that. We are talking about a pretty old scope here. I wish I could have gotten their castoffs. :-)

If you think about it, gold is nice but not really necessary for contact to be made. Just cleanliness and a minute amount of pressure. Restoring those will fix it every time.

--
Bill, W7TI

1086. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 03:19:25 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <E2_1a.71180$lj.3151752@read1.cgocable.net>
Source record: 37889
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Rich: I think you are right..Norm

"Rich Osman" <Rich@osman.com> wrote in message
news:3E4836D1.1040209@osman.com...
> FM wrote:
> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> > purchased crystals in many years where is the best place to buy them ??
We
> > will be using the repeater on 146.01/61.Also is there a site with the
specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.
>
> I'm not certian, but I beleive these are the same element used in the
> Mitrek mobile, making them fairly common.
>
>
> --
> mailto:Rich@Osman.com http://www.rich.osman.com
> Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ
>
> If you receive something that says "Send this to everyone you know,"
> PLEASE pretend you don't know me.
>

1087. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 04:30:12 UTC
From: hexter@blazenet.net
Message-ID: <v4gv2kjj7gu10d@corp.supernews.com>
Source record: 37890

In article <26d721d9.0302101740.765aa95@posting.google.com>,
aotemp@hotmail.com says...
>
>Im trying to build a radar system that will detect another device
>(also to be built by me) within a 1/4 mile radius. I really need
>some of the smart people's advice and direction as to how to
>accomplish this.
>
>the device will not be in the air or under water, it will be like a
>person on land. The radar detector should be able to locate that
>"person" (to some degree) (I am a software engineer and can interpret
>the signals if presented properly)...
>
>Thank you so much for your help!
>
>ps. the email is fake, but I will check online messages.

As another poster has said, ultrasonic sound waves, or infrared light is your best option. Radar, as in radio waves is just about useless at this close in range, and to get good resolution with a reasonable antenna is just to complicated. I have done a similar project with ultrasonics to detect horses out on pasture, and intruders around a lake. Still have pieces of it around.

1088. Re: Anyone have an SDK-85 or 86 to sell cheap?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 04:40:03 UTC
From: hexter@blazenet.net
Message-ID: <v4gvl3t0c9s09b@corp.supernews.com>
Source record: 37891

In article <3E45ED3C.42E02A31@bloomer.net>, acepilot@bloomer.net says...
>
>Looking for the single board SDK-85 computer trainer. Used an 8085 CPU.
>The SDK-86 used the 8086 and this would be acceptable as well. Working
>preferred, unless you have a manual, then repairable one is OK too!
>
>--
>
>Scott
>http://corbenflyer.tripod.com
>http://groups.yahoo.com/group/ParasolAirplanes
>Building RV-4
>Gotta Fly or Gonna Die!

I owned one of the SDK-85 units, and I have built several duplicates
from scratch. One is a dedicated Eprom programmer still in use today.
I am guessing I could photocopy some stuff for you. B.T.W., I have re-
written the 'Monitor' program about 50 differant times, and am probably
the expert on it by now. Post a reply to the group if you are interested.
My addy is totally bogus for anti-spam-ability, but I can get with you
directly if your addy is a good one.

1089. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 06:05:01 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e48923c.3804097@news.cantech.net.au>
Source record: 37892

On 10 Feb 2003 17:40:38 -0800, aotemp@hotmail.com (x) wrote:

>Im trying to build a radar system that will detect another device
>(also to be built by me) within a 1/4 mile radius. I really need
>some of the smart people's advice and direction as to how to
>accomplish this.
>
>the device will not be in the air or under water, it will be like a
>person on land. The radar detector should be able to locate that
>"person" (to some degree) (I am a software engineer and can interpret
>the signals if presented properly)...

If you are really trying to "detect another device" then why aren't
you considering an active transponder rather than a passive
reflection-type system?

1090. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 06:36:58 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <vf4h4v8kj4g1i028g1qa1r719ooe800bgb@4ax.com>
Source record: 37895

On Tue, 11 Feb 2003 03:05:35 -0000, "Bill, W7TI" <jamspam@upyours.now>
opined thusly:

>I don't doubt that was said, but I do doubt if it's really true. Even if
>the gold plating wore off, there is the base metal under it and contact
>could still be made if the contact were bent down some more and the
>surfaces were clean. I suspect the service guys either didn't know the
>trick or just didn't want to bother. And it is a trick - someone had to
>show me how to do it. Their approach was most likely to just change the
>whole assembly, and when those became unavailable due to age, that was
>that. We are talking about a pretty old scope here. I wish I could have
>gotten their castoffs. :-)

When exactly were the bulk of these scopes made, then, Bill? And can
you give those of us unfamiliar with them some idea of their spec.,
and why they're so sought after second-hand?

>If you think about it, gold is nice but not really necessary for contact
>to be made. Just cleanliness and a minute amount of pressure. Restoring
>those will fix it every time.

I suppose one could just frequently spray the worn contacts with
switch cleaner/lube, but I suspect it wouldn't be long before the
switches became noisy again. :-(
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1091. Findlay Stingray 140F help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 11:19:58 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e49dc24.9364883@news.freeserve.co.uk>
Source record: 37893

Hi
I'm trying to find some info circuit or similar on
The Stingray 140F ssb transceiver made by the
Australian company Findlay I think it was originaly
a schools radio or used for that purpose..

cheers
from Ron ronayling@hotmail.com

1092. Re: Anyone have an SDK-85 or 86 to sell cheap?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 11:59:38 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E48E5AA.93187EBA@bloomer.net>
Source record: 37894

Yes, I'd be interested. Does the documentation list the source code for
the monitor program as well? How many pages of documentation are there
(would it be feasible [ie economical] to copy all pages)?

Scott
N0EDV

gudmundur wrote:
>
> In article <3E45ED3C.42E02A31@bloomer.net>, acepilot@bloomer.net says...
> >
> >Looking for the single board SDK-85 computer trainer. Used an 8085 CPU.
> >The SDK-86 used the 8086 and this would be acceptable as well. Working
> >preferred, unless you have a manual, then repairable one is OK too!
> >
> >--
> >
> >Scott
> >http://corbenflyer.tripod.com
> >http://groups.yahoo.com/group/ParasolAirplanes
> >Building RV-4
> >Gotta Fly or Gonna Die!
>
> I owned one of the SDK-85 units, and I have built several duplicates
> from scratch. One is a dedicated Eprom programmer still in use today.
> I am guessing I could photocopy some stuff for you. B.T.W., I have re-
> written the 'Monitor' program about 50 differant times, and am probably
> the expert on it by now. Post a reply to the group if you are interested.
> My addy is totally bogus for anti-spam-ability, but I can get with you
> directly if your addy is a good one.

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1093. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 14:06:48 UTC
From: mikea@mikea.ath.cx
Message-ID: <b2b01o$fn9$3@puck.litech.org>
Source record: 37896

Paul Burridge <redscar@waitrose.notthisbit.com> wrote:
> On Tue, 11 Feb 2003 03:05:35 -0000, "Bill, W7TI" <jamspam@upyours.now>
> opined thusly:

> >I don't doubt that was said, but I do doubt if it's really true. Even if
> >the gold plating wore off, there is the base metal under it and contact
> >could still be made if the contact were bent down some more and the
> >surfaces were clean. I suspect the service guys either didn't know the
> >trick or just didn't want to bother. And it is a trick - someone had to
> >show me how to do it. Their approach was most likely to just change the
> >whole assembly, and when those became unavailable due to age, that was
> >that. We are talking about a pretty old scope here. I wish I could have
> >gotten their castoffs. :-)

> When exactly were the bulk of these scopes made, then, Bill? And can
> you give those of us unfamiliar with them some idea of their spec.,
> and why they're so sought after second-hand?

> >If you think about it, gold is nice but not really necessary for contact
> >to be made. Just cleanliness and a minute amount of pressure. Restoring
> >those will fix it every time.

> I suppose one could just frequently spray the worn contacts with
> switch cleaner/lube, but I suspect it wouldn't be long before the
> switches became noisy again. :-(

Has anyone tried one of those el-cheapo gold plating kits that get
advertised on TV in the wee hours? If all that's needed is a thin gold
coating, it sounds like that'd be a way to get it. Have to start off
with a clean surface, of course, but that's not at all hard.

--
There are mushrooms that can survive weeks, months without air or
food. They just dry out and when water comes back, they wake up
again. And call the helldesk about their password expiring.
-- after Jens Benecke and Tanuki the Raccoon-dog, in ASR:

1094. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 15:24:46 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931F4B691400pookster@216.168.3.50>
Source record: 37797

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:vf4h4v8kj4g1i028g1qa1r719ooe800bgb@4ax.com:

> When exactly were the bulk of these scopes made, then, Bill? And can
> you give those of us unfamiliar with them some idea of their spec.,
> and why they're so sought after second-hand?

Production was already running when I started at Tek in 1977 and still going strong when I transferred to another department in 1980. I remember the announcement about production ending but I don't recall the exact year. Early '80s sometime.

I think the reason they're so sought after is they work extremely well and are very easy to use. The trigger circuit was especially good, well ahead of it's time. Easy to configure as to trigger source and mode and it always seemed to do just what you wanted. I've used lots of other scopes that seemed to have a mind of their own when it comes to triggering. If you've ever used one you'll know what I'm talking about. And nowdays, the price is pretty good too. I got a 465B off eBay a couple of years ago for $250. Works fine, even the switches. Incidentally, the new price back then was in the $2500 range, a lot of money for a portable scope but we sold a ton of 'em. Quality talks.

>
>>If you think about it, gold is nice but not really necessary for
>>contact to be made. Just cleanliness and a minute amount of pressure.
>> Restoring those will fix it every time.
>
> I suppose one could just frequently spray the worn contacts with
> switch cleaner/lube, but I suspect it wouldn't be long before the
> switches became noisy again. :-(

That's true. I didn't mean to imply that contacts with the gold worn off were just as good. The gold is there for a good reason, it's just not absolutely necessary. Given regular cleaning, the scope will work without it.

--
Bill, W7TI

1095. WTB: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 16:36:07 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net>
Source record: 37798
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only needs 3 frequencies and it is easier and cheaper for him to count the clicks.Low power is fine too.
A plus would be any of the frequencies he needs which are:
444.55 +
443.70 +
446.00 simplex
THANKS

1096. Microwave Goodies & Power Supply & DC to DC converters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 17:27:05 UTC
From: Mike Kulyk <kulykm@suffolk.lib.ny.us>
Message-ID: <Wja2a.3921$io.151439@iad-read.news.verio.net>
Source record: 37799
Cross-posted to: misc.industry.electronics.marketplace,alt.ham-radio.uwave,rec.radio.swap,rec.radio.amateur.homebrew

TS-15-F-SMA-I-SD-DE9P-C+ (we have 6, new price was $316) DC to 18GHz Coax Transfer Switch Failsafe Actuator with suppression diodes and indicators, 15VDC, 9 pin D sub-min interface, 0.5dB insertion loss max, Power Handling: 400W @ 100MHz, 175W @ 1GHz, 60W @ 10GHz. K & L purchased by Dow Key. I have a more complete spec sheet in PDF. Please e-mail if you want the more complete sheet. And Pictures
$45 each

Andrews WR-75 90 degree waveguide bend. P/N 55221-75-E708D. I was planning to use this on my 10 ghz equipment , but I changed my mind. Pictures available by e-mail
$65

Power One Open Frame 28 vdc power supply. Power One Model HC-28 2-A. 28vdc at 2 amps. Tested and working..
$20

Aydin 14.0-14.5 ghz GaAS Fet Microwave PreAMP P/N A22796 rev A. 20 db gain + 15 vdc. I tried to use this on my 10 ghz equipment. it raised the noise floor of the receiver, but would not pass a signal...
$20

Mini-Circuits ZFSC-2-10G 2way splitter new price $70) 2GHz - 10GHz 1dB insertion loss above 3dB split, 12 dB isolation
$35 each

Litton 8 - 18GHz Type L-2384-02 Tube
This is a microwave tube. I have NO data on it and I have NO way to test it.
$50

New in the Box VICOR MEGA MODULE DC-DC Converters. Model number VI-M3L-CS Input: 48Vdc 400Watts Output: 28Vdc 300Watts Operating Temperature Range -20 C to +85 C Requires mount to Heatsink. Full MFG.'s Data Sheet at

http://www.vicr.com/products/datasheets/ds_megamod.pdf

App Notes also available http://www.vicr.com/

New price was about $375 each... $100 each

4.2 - 5.0 GHz 1/2 Watt linear driver Amp; 1 Watt Sat power; 47dB gain nominal at 1/2 Watt power output. DC Input: +12V 0.5A. Tested and working. Supplied with lab test data sheet. $50

I have jpegs on all items above.

1097. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 19:04:52 UTC
From: The Simpsons <grant@simtronics.co.nz>
Message-ID: <CPb2a.82049$F63.1673928@news.xtra.co.nz>
Source record: 37800
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

A synthesised rig will work if you can program just the frequencies he needs in to memory. If the rig uses UP and DOWN buttons on the mic, then he only needs to count the button pushes from the first to last memory. This works as long as the memories don't roll over. If they do, most rigs beep at memory position 1. Probably easier to find one of these than a crystal controlled rig, and more versatile if you need to add or change frequencies later.

Grant, ZL2BK

"SWL" <radiovintage@hotmail.com> wrote in message
news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> needs 3 frequencies and it is easier and cheaper for him to count the
> clicks.Low power is fine too.
> A plus would be any of the frequencies he needs which are:
> 444.55 +
> 443.70 +
> 446.00 simplex
> THANKS
>
>

1098. Re: Scope Pic - Elecraft K2 CW Envelope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 20:45:20 UTC
From: eric@elecraft.com
Message-ID: <ad8a96ee.0302111245.399061db@posting.google.com>
Source record: 37801

Hi Bill,

In this case there are not any noticeable clicks form the K2. The
picture noted below may appear a little sharper than reality due to
the way he sampled the signal with his digital scope. There actually
is a little more rounding on the trailing edge than he shows.

Both Wayne and I are CW ops and are pretty picky about the sound of
our rigs. We paid a lot of attention to the CW wave shape design and
we tested it extensively to insure it didn't create key clicks.

73, Eric WA6HHQ
http://www.elecraft.com
======

"William E. Sabin" <sabinw@mwci-news> wrote in message
news:<3E4382B5.5060807@mwci-news>...

> > 72/73
> > John Seney, WD1V [FN42]
> > QRP ARCI 10345 K2 #1388
> > FIST #5014 CC: 1151
> > http://www.qsl.net/wd1v
> > HP Velo Recumbent Biker
>
> The sharp trailing edge creates strong clicks, and
> should be "rounded" by filtering. See chapter 17
> of the 2003 ARRL Handbook.
>
> Bill W0IYH

> JS wrote:
> > Everyone knows K2 rigs hear great and sound great. It should come as no
> > surprise that on scope screens, K2s also look great!
> >
> > Here is a link to a really gorgeous K2 Keying Envelope created with
> > a high performance digital scope using deep (24 Million Sample)
> > deep memory.
> >
> > http://www.qsl.net/wd1v/LECROY.JPEG
> >
> >

1099. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 22:28:52 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <9gri4vsnda0dlr64mv2a7s3grnas7pd949@4ax.com>
Source record: 37802

On Tue, 11 Feb 2003 15:24:46 -0000, "Bill, W7TI" <jamspam@upyours.now>
opined thusly:

>That's true. I didn't mean to imply that contacts with the gold worn off
>were just as good. The gold is there for a good reason, it's just not
>absolutely necessary. Given regular cleaning, the scope will work
>without it.

Thanks. What sort of bandwidth and input impedance did they have?

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1100. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-11 23:01:00 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931F98C2F6661pookster@216.168.3.50>
Source record: 37803

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:9gri4vsnda0dlr64mv2a7s3grnas7pd949@4ax.com:

> Thanks. What sort of bandwidth and input impedance did they have?
>

Bandwidth was 100 MHz at -3 dB. The input impedance as best as I recall
was 1 meg shunted with aprox 20pf. Pretty sure on the 1 meg, a little less
sure on the 20pf.

It's been 23 years. :-)

--
Bill, W7TI

1101. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 00:32:29 UTC
From: aotemp@hotmail.com
Message-ID: <26d721d9.0302111632.1c417302@posting.google.com>
Source record: 37804

budgie <budgie@nowhere.cantech.net.au> wrote in message
news:<3e48923c.3804097@news.cantech.net.au>...
> On 10 Feb 2003 17:40:38 -0800, aotemp@hotmail.com (x) wrote:
>
> >Im trying to build a radar system that will detect another device
> >(also to be built by me) within a 1/4 mile radius. I really need
> >some of the smart people's advice and direction as to how to
> >accomplish this.
> >
> >the device will not be in the air or under water, it will be like a
> >person on land. The radar detector should be able to locate that
> >"person" (to some degree) (I am a software engineer and can interpret
> >the signals if presented properly)...
>
> If you are really trying to "detect another device" then why aren't
> you considering an active transponder rather than a passive
> reflection-type system?

Truth is that I dont know much about what the best options are... I
am serious about building something that will work like this, but I
guess I need some guidance as to what avenue would take me to the best
solution. If anyone would like to give me some insight as to what
they have on their mind I would love to hear it..

Again thanks everyone for responding, Any guidance would be great.

1102. Kepco BHK-2000-0.1 supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 00:41:38 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <R-acnbDCVcBKBdSjXTWcqA@comcast.com>
Source record: 37805

I listed it on ebay for a buck -- the 8068 regulator tubes were damaged and these are impossible to source. I believe they are a very high voltage tetrode with octal base. If someone is looking for a microwave power supply (I suppose Kepco was kept in business by Grumman out on LI, or whatever.) I just want the thing out of the basement.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3007689004
Jack

1103. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 01:20:03 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E49A148.F5BAF809@silverstar.com>
Source record: 37806

Check West Marine catalog [www.westmarine.com] for ideas on short range radar, freq, pwr, etc. No experience with radars of less than 100 mile range. Even fire control radar for 3" gun mount on DER had 10-mile range. Not my equipment. Troops and helo crewmembers in 'nam scattered lumps looking like animal fecal matter which would transmit vibrations of equipment, troops in boots or VC wearing sandals and carrying supplies on Ho Chi Minh Trail to receivers for evaluation. Saw some advertised in Fair Radio catalog some years back. Check with www.fairradio.com.

1104. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 01:23:38 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E49A21F.4844E74C@silverstar.com>
Source record: 37807

You can still find some Polaroid ultrasonic xmtr/rcvr systems on certain
surplus sites.
Try www.alltronics.com
-or-
www.halted.com
-or-
www.allelectronics.com

1105. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 01:28:22 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v4j8t8mcubfuea@corp.supernews.com>
Source record: 37808
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I recently programmed a 706 for a blind friend. What he did was to have me program an FM broadcast station on a particular channel, then he could count from that channel (most synthesized rigs have encoders with no end stops so if you ever loose your place you're done).

I had more or less assumed that the 706 was impossible for a blind ham because of the menu, but some of the menu beeps turn out to have a slightly different sound than others, so he was able to navigate the menus quite well.

On a 440 only rig I don't know of any places you could find an "always on" station like that, but on a dual bander you could program the weather station into channel 1, then his stations into 2, 3, and 4. He would then be able to tune around until he heard the computer voice and count from there.

..

"The Simpsons" <grant@simtronics.co.nz> wrote in message
news:CPb2a.82049$F63.1673928@news.xtra.co.nz...
> A synthesised rig will work if you can program just the frequencies he
needs
> in to memory. If the rig uses UP and DOWN buttons on the mic, then he only
> needs to count the button pushes from the first to last memory. This works
> as long as the memories don't roll over. If they do, most rigs beep at
> memory position 1. Probably easier to find one of these than a crystal
> controlled rig, and more versatile if you need to add or change
frequencies
> later.
>
> Grant, ZL2BK
>
> "SWL" <radiovintage@hotmail.com> wrote in message
> news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> > Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> > needs 3 frequencies and it is easier and cheaper for him to count the
> > clicks.Low power is fine too.
> > A plus would be any of the frequencies he needs which are:
> > 444.55 +
> > 443.70 +
> > 446.00 simplex
> > THANKS
> >
> >

>
>

1106. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 01:45:44 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <6q9j4vsrg9bg2rvk90ve4h7uvettf27oju@4ax.com>
Source record: 37809

On Tue, 11 Feb 2003 23:01:00 -0000, "Bill, W7TI"
<jamspam@upyours.now> wrote:

>Bandwidth was 100 MHz at -3 dB. The input impedance as best as I recall
>was 1 meg shunted with aprox 20pf. Pretty sure on the 1 meg, a little less
>sure on the 20pf.
>
>It's been 23 years. :-)
>
>--
>Bill, W7TI

I have a manual. What you stated is exactly what the book says.
Gives a tolerance of 2% on the 1 M impedance.

My 465 scope currently has lost its HV supply. I assume I will be
able to fix it, but haven't gotten around to a seroius look yet. Is
there a common failure in the HV supply that I should look for
first?

-Rex, KK6MK
[rexa -TheAtSign- Next4dnai -period- (comEnding)]

1107. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:04:24 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b2ca3b$34i$1@slb6.atl.mindspring.net>
Source record: 37810

> On 10 Feb 2003 17:40:38 -0800, aotemp@hotmail.com (x) wrote:
>
>Im trying to build a radar system that will detect
> another device (also to be built by me) within a
> 1/4 mile radius. I really need some of the smart
> people's advice and direction as to how to
> accomplish this.
>

Something that would help in figuring what will be useful is a better understanding of how you intend to use the system.

For example, if you are planning to place a bug on a car and be able to follow it, that is one type of application, or if you want to place a bug on a hot air ballon to let you find it when it lands, that's a very different sort of thing.

So, we could take guesses and make suggestions, but they may not be anywhere near the right solution.....

==========

How precise does the location have to be ?

Is this in open country, or in city areas with cars and so on ?

How large can the device to be detected be physically ?

How long does the battery have to last in the device to be detected ?

==========

In other words, exactly what do you want to be able to use the device for ?

Given the answers to these questions, we might be able to give better suggestions.

Jim

1108. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:09:43 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931FB8C1B343Epookster@216.168.3.50>
Source record: 37811

Rex <notreally@hotmail.invalid> wrote in
news:6q9j4vsrg9bg2rvk90ve4h7uvettf27oju@4ax.com:

> My 465 scope currently has lost its HV supply. I assume I will be
> able to fix it, but haven't gotten around to a seroius look yet. Is
> there a common failure in the HV supply that I should look for
> first?
>

HV failures are pretty rare so I can't really help much there. Check all the lower voltage power supplies first. There are half a dozen or more. The 55 volt supply is the "master" supply in the sense that all others are referenced to it. Be sure it is correct first before checking the others. An error there will foul up everything in the scope.

--
Bill, W7TI

1109. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:13:49 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e49b1b4$1_3@news1.prserv.net>
Source record: 37813
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

It might be easier to find a Kenwood with the voice synthesizer which will allow him to do much more then just the three channels. I don't know about recent rigs, but I remember it being an available option on the TW-4000A, which includes two meters also.

Another possibility is one of the thumbwheel programmed rigs. A Braille mark on each thumbwheel would provide a reference.

You see, I don't recall very many crystal UHF ham radios except for GE/Motorola/RCA, and those are a little ancient and cumbersome. Also very cheap these days, I have to admit.

--
Crazy George
Remove NO and SPAM from return address
"SWL" <radiovintage@hotmail.com> wrote in message
news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> needs 3 frequencies and it is easier and cheaper for him to count the
> clicks.Low power is fine too.
> A plus would be any of the frequencies he needs which are:
> 444.55 +
> 443.70 +
> 446.00 simplex
> THANKS
>
>

1110. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:14:05 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <083965C9F0087991.E4E380625BFCD038.4DEB9CBBED9989E7@lp.airnews.net>
Source record: 37812

"Michael Franks" <pikemike@nnex.net> wrote:
>What is the transistor equivalent of "Plate
>Modulation" ??

Absolutely the same annoying whines, atrocious bandwidth consumption
and general absence of concern for effective spectrum utilization.
So, in all important respects, they are exactly equivalent.

Fred, W8OY
jfriley@ieee.nospam.org

1111. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:32:17 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931FBC957F0FBpookster@216.168.3.50>
Source record: 37814

Prefered Customer <jfriley@no.thanks.ieee.org> wrote in
news:083965C9F0087991.E4E380625BFCD038.4DEB9CBBED9989E7@lp.airnews.net:

>>What is the transistor equivalent of "Plate
>>Modulation" ??
>
> Absolutely the same annoying whines, atrocious bandwidth consumption
> and general absence of concern for effective spectrum utilization.
> So, in all important respects, they are exactly equivalent.
>
>

Oooh, touched a nerve on 'ol Fred there.

To answer the question, it's "collector modulation" if you're using a
common emitter circuit, which most designs do.

Fred forgot to mention the more pleasing audio of good AM. Listen around
29.0 when the band is open, then go back to SSB and compare.

Actually there's no comparison, so never mind.

--
Bill, W7TI

1112. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 02:49:10 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Oui2a.3186$FT2.3016@fe01.atl2.webusenet.com>
Source record: 37815
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Bingo! and has dev pot on it, too-- jim

"Norm VE3CZI" <ve3czi@arrl.net> wrote in message
news:E2_1a.71180$lj.3151752@read1.cgocable.net...
> Rich: I think you are right..Norm
>
>
> "Rich Osman" <Rich@osman.com> wrote in message
> news:3E4836D1.1040209@osman.com...
> > FM wrote:
> > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> > > purchased crystals in many years where is the best place to buy them
??
> We
> > > will be using the repeater on 146.01/61.Also is there a site with the
> specs
> > > for the channel elements ?
> > > Rcvr Channel Element : KXN 1086A
> > > Xmtr Channel Element : KXN 1088A
> > > THANKS.
> >
> > I'm not certian, but I beleive these are the same element used in the
> > Mitrek mobile, making them fairly common.
> >
> >
> > --
> > mailto:Rich@Osman.com http://www.rich.osman.com
> > Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ
> >
> > If you receive something that says "Send this to everyone you know,"
> > PLEASE pretend you don't know me.
> >
>
>

1113. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 04:04:13 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v4ji0a602o9v6f@corp.supernews.com>
Source record: 37816
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In fact, my friend's 706 has a voice synthesizer, which is useful to him on HF where there really isn't much of an alternative. But on VHF/UHF, you would rather just go 2 clicks and be there. He has, if I recall, around 2 dozen channels programmed, but he also operates HF. Clicking past the broadcast channel is a little more convenient than pressing the "talk the frequency" button and waiting to hear the droning voice.

..

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message news:3e49b1b4$1_3@news1.prserv.net...
> It might be easier to find a Kenwood with the voice synthesizer which will
> allow him to do much more then just the three channels. I don't know about
> recent rigs, but I remember it being an available option on the TW-4000A,
> which includes two meters also.
>
> Another possibility is one of the thumbwheel programmed rigs. A Braille
> mark on each thumbwheel would provide a reference.
>
> You see, I don't recall very many crystal UHF ham radios except for
> GE/Motorola/RCA, and those are a little ancient and cumbersome. Also very
> cheap these days, I have to admit.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "SWL" <radiovintage@hotmail.com> wrote in message
> news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> > Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> > needs 3 frequencies and it is easier and cheaper for him to count the
> > clicks.Low power is fine too.
> > A plus would be any of the frequencies he needs which are:
> > 444.55 +
> > 443.70 +
> > 446.00 simplex
> > THANKS
> >
> >
>
>

1114. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 06:17:50 UTC
From: larryc@northwest.com
Message-ID: <3E49E70D.DF451A82@northwest.com>
Source record: 37817

Sounds much like "television"

Or, any politician.
============

Prefered Customer wrote:

> "Michael Franks" <pikemike@nnex.net> wrote:
> >What is the transistor equivalent of "Plate
> >Modulation" ??
>
> Absolutely the same annoying whines, atrocious bandwidth consumption
> and general absence of concern for effective spectrum utilization.
> So, in all important respects, they are exactly equivalent.
>
> Fred, W8OY
> jfriley@ieee.nospam.org

1115. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 08:02:46 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0302120002.17aefe20@posting.google.com>
Source record: 37818

Look at http://w1.859.telia.com/~u85920178/use/gdo.htm

73 de Ivan OK1SIP

1116. WTB: MRF5812, MRF5943 transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 13:05:18 UTC
From: Dimitris Mylonopoulos <mylond@otenet.gr>
Message-ID: <b2dgqa$23e$1@usenet.otenet.gr>
Source record: 37819
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

hi. I am looking to buy 3 pieces of MRF5812 and 3 pieces of MRF5943
LNA general purpose transistors of any brand.
if you have any send me an e-mail. Dimitris

1117. FA: MORE HAM STUFF ON EBAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 14:03:20 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <lus2a.33317$rq4.2504287@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37820

on eBay now:

Millen GDO part
Svetlana 6550's
UTC CVL-1
Collins 30L-1 rf parts
115v ac ant relay
UE 572b's

other stuff coming
heytubeguy

1118. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 17:12:43 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <22AA80F1A19E43C7.C65CC085E800FF62.9641136482D1AC60@lp.airnews.net>
Source record: 37821

"Bill, W7TI" <jamspam@upyours.now> wrote:
>Fred forgot to mention the more pleasing audio of good AM.

Unless, of course, one is willing to insure adequate bandwidth for transmission and reception and to incorporate a hang AGC in which case there's no difference at all except with single sideband we have the absence of an unwanted, unused sideband, the absence of an unwanted, annoying, power wasting and generally useless carrier, and, of course, the incredible reduction in power consumption for a given speech transmissibility. Remember AM doesn't stand for Antique Modulation, it stands for Antisocial Modulation.

Fred, W8OY
jfriley@ieee.nospam.org

1119. Small Wonders SW+ or Wilderness Radio SST?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 22:32:33 UTC
From: "bw@NOSPAMdidah.com" <bw1@NOSPAMcorecomm.net>
Message-ID: <3E4ACB81.4118F925@NOSPAMcorecomm.net>
Source record: 37822
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

I'm trying to determine which is the better radio, the Small Wonders SW+ or Wilderness Radio SST? Does anyone here have an opinion?

They are very similar. Perhaps this is splitting hairs. If you have built both then I'd like to hear your experience.

Thanks for your help.

Links:
Small Wonders Labs: http://www.smallwonderlabs.com/
Wilderness Radio: http://www.fix.net/~jparker/wild.html

1120. Re: AMP list

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-12 23:16:58 UTC
From: AC6V <none@nowhere.com>
Message-ID: <KBA2a.58624$LW1.1850218@news1.west.cox.net>
Source record: 37823

Walt -- Try AMPS FAQ at URL:
http://www.contesting.com/FAQ/?contestingsid=dfea5db36ecb8489125cbb2d69a99d3
c

Archives at URL:
http://lists.contesting.com/_amps/

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Walt" <device@null.com> wrote in message
news:2gkl4vo6ifdil5hsm76qpdet888pv11psm@4ax.com...
> Looking for a email list, or web based list
> that specializes in the construction of
> ham tube amps and such.
>
> Walt
> k4wde
>

1121. Re: Small Wonders SW+ or Wilderness Radio SST?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 00:38:06 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E4AE994.654F59C3@cox.net>
Source record: 37824
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

They are both nice radios. The SST has more limited tuning range since it is VXO. I understand these rigs are used a lot in some of the QRP contests because they can be extremely lightweight and the tuning range limitation is not an issue.

I know at least on 20m, the SST is extremely sensitive. This is good in that it will pick up very tiny signals given good band conditions (such as other SSTs!), but would not be good handling large neighboring signals of a QRO cw contest.

I think the SW+ series has a VFO with a broader range of tuning. If you want to work QRP contests as well as drop down to the bottom of the band and try QRP Dxing, then this is a better rig.

- Dan, N7VE

"bw@NOSPAMdidah.com" wrote:
>
> I'm trying to determine which is the better radio, the Small Wonders SW+
> or Wilderness Radio SST? Does anyone here have an opinion?
>
> They are very similar. Perhaps this is splitting hairs. If you have
> built both then I'd like to hear your experience.
>
> Thanks for your help.
>
> Links:
> Small Wonders Labs: http://www.smallwonderlabs.com/
> Wilderness Radio: http://www.fix.net/~jparker/wild.html

1122. feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 01:18:29 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045099113.775876@auth2.dns.griffin.net.uk>
Source record: 37825

does anyone know of a uk supplier of 1000pf feed through (solder in)
caps??
need lots so cheaper the better.. surplus fine..

thanks

simon

1123. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 01:24:05 UTC
From: aotemp@hotmail.com
Message-ID: <26d721d9.0302121724.7cdb2ab3@posting.google.com>
Source record: 37826

ok the general idea is to attach a small device to my cat. It tends
to get lost easily (or likes to hide), so on those cold winter nights
we want to know where we can go out and find it.

location = suburbs.
distance = less than a mile radius is needed
battery life = 8+ hours
size = small as possible

what about the transponder idea? could that be a valid solution?

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:<b2ca3b$34i$1@slb6.atl.mindspring.net>...
> > On 10 Feb 2003 17:40:38 -0800, aotemp@hotmail.com (x) wrote:
> >
> >Im trying to build a radar system that will detect
> > another device (also to be built by me) within a
> > 1/4 mile radius. I really need some of the smart
> > people's advice and direction as to how to
> > accomplish this.
> >
>
> Something that would help in figuring what will be useful is a better
> understanding of how you intend to use the system.
>
> For example, if you are planning to place a bug on a car and be able to
> follow it, that is one type of application, or if you want to place a bug on
> a hot air ballon to let you find it when it lands, that's a very different
> sort of thing.
>
> So, we could take guesses and make suggestions, but they may not be
> anywhere near the right solution.....
>
> ================
>
> How precise does the location have to be ?
>
> Is this in open country, or in city areas with cars and so on ?
>
> How large can the device to be detected be physically ?
>
> How long does the battery have to last in the device to be detected ?
>
> ================
>

> In other words, exactly what do you want to be able to use the device for
> ?
>
>
>
>
> Given the answers to these questions, we might be able to give better
> suggestions.
>
>
> Jim

1124. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 03:08:10 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b2f26undu1@slb9.atl.mindspring.net>
Source record: 37827

Well, a device to attach to a cat poses some interesting problems. It has GOT to be very small and lightweight or else the cat will have problems. This means a very small battery, and no real antenna to speak of.

So, considering cars, houses, and whatever between you and the cat, it will be nearly impossible to get any reasonable range out of it. Plus, the small battery means extremely limited operating time and a very low power transmit signal.

To Triangulate on the signal, you'd need two base recievers and probably a portable unit too. Tracking RF to the degree of being able to find a cat is a time consuming business.

Some sort of transponder, which uses very little power until it gets a command signal might help the battery life, but even so the range would be a big problem.

A radio transponder would need a reciever and a transmitter and a control ciruit. This all add's up to a physically bulky package and that isn't even thinking about the battery or any sort of antenna.

You'd need to use a very high frequency to make a small antenna work with any degree of efficiency, and that all takes parts, space, and battery power.

Not to mention probably being illegal, with an unliscensed radio transmitter....

==========

Possibly some sort of acoustic system, which uses a microphone and an ultrasonic beeper could work to some degree.

Still, no range, really. But if you walked, or possibly drove, around the neighborhood pulsing the command tone, the unit could 'hear' it and activate the ultrasonic beeper in response. You'd have to use directional microphones to track it down but it might work after a fashion.

==========

All in all, this is NOT a simple tracking system you are asking for, particularly due to the limits on the size and weight due to having to be a reasonable thing to strap on a cat's collar, or some sort of harness.

I suspect trying to make an electronic tracker of some sort will be extremely difficult, and much more trouble than it's worth.

It's been my experience that a cat generally can't get lost easily. It may, or may not, choose to come home but they are rarely lost.

Jim

1125. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 03:12:51 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320C3744681Cpookster@216.168.3.50>
Source record: 37828

Prefered Customer <jfriley@no.thanks.ieee.org> wrote in
news:22AA80F1A19E43C7.C65CC085E800FF62.9641136482D1AC60@lp.airnews.net:

> the absence of an unwanted,
> annoying, power wasting and generally useless carrier, and, of course,
> the incredible reduction in power consumption for a given speech
> transmissibility. Remember AM doesn't stand for Antique Modulation,
> it stands for Antisocial Modulation.
>

Sounds like you're a Man With a Mission, Fred. Want to tell us about it?

Zapped by some AM RF in your younger days?

--
Bill, W7TI

1126. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 03:26:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4m440ajhfu86a@corp.supernews.com>
Source record: 37829

Bill, W7TI wrote:
> Prefered Customer <jfriley@no.thanks.ieee.org> wrote in
> news:22AA80F1A19E43C7.C65CC085E800FF62.9641136482D1AC60@lp.airnews.net:
>
>
>>the absence of an unwanted,
>>annoying, power wasting and generally useless carrier, and, of course,
>>the incredible reduction in power consumption for a given speech
>>transmissibility. Remember AM doesn't stand for Antique Modulation,
>>it stands for Antisocial Modulation.
>>
>
> ____
>
> Sounds like you're a Man With a Mission, Fred. Want to tell us about it?
>
> Zapped by some AM RF in your younger days?
>

Maybe he's just old enough to remember the screeching, whining heterodynes.

AM is great as long as nearly everybody else is running SSB, just like you don't really need a vaccination against most diseases, or the risk it entails, as long as most of the rest of the population has been vaccinated.

Roy Lewallen, W7EL

1127. Re: Convert 110v device to 110/220v???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 03:44:54 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BA707EE5.E78F%stewart@say.net>
Source record: 37830

"Vince A. Patron" wrote:
>
> (snip) Boy, this subwoofer must be so special
> that you can't just buy another one... :-)

The subwoofer is only special in that the idea of converting it scratches a really old itch. When I was overseas, there were many occasions when 110v items attracted my attention and I wondered if there was a way to convert them. And, if not, why. But, if so, how. Those questions remained unanswered.

Since I'm heading back overseas, those questions came flooding back and I decided to ask in these newsgroups. I figured I had a better chance of finding an answer here than anywhere else. But, rather than vague theory, I decided to use a real world example - the subwoofer. Yes, I know not all items are like this subwoofer, but it gives me a start at the answers. And that is really all I was after.

I'll play with this subwoofer using what I've learned here. If I'm successful, I'm that much closer to finding out what I wanted to know. If I'm not, I'll write this subwoofer off as an experiment gone bad. Either way, I have more knowledge than I had before.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

1128. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 03:57:03 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320CAF2BC78Epookster@216.168.3.50>
Source record: 37831

Roy Lewallen <w7el@eznec.com> wrote in
news:v4m440ajhfu86a@corp.supernews.com:

> Maybe he's just old enough to remember the screeching, whining
> heterodynes.
>
> AM is great as long as nearly everybody else is running SSB, just like
> you don't really need a vaccination against most diseases, or the risk
> it entails, as long as most of the rest of the population has been
> vaccinated.
>

Yep, I remember them too, especially 75 meters on a winter evening back
in the '50s. There's never been a sound quite like it since.

But that was all settled decades ago and Fred's still banging the drum.
Just curious why. Some kind of time warp? Didn't they make a movie
about that?

--
Bill, W7TI

1129. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 05:38:47 UTC
From: cdb <cdb141@elderberry.net>
Message-ID: <3E4B2F63.1060308@elderberry.net>
Source record: 37832

The only whining here is you. Want cheese with it?

-cdb

Prefered Customer wrote:
> "Michael Franks" <pikemike@nnex.net> wrote:
>
>>What is the transistor equivalent of "Plate
>>Modulation" ??
>
>
> Absolutely the same annoying whines, atrocious bandwidth consumption
> and general absence of concern for effective spectrum utilization.
> So, in all important respects, they are exactly equivalent.
>
> Fred, W8OY
> jfriley@ieee.nospam.org

1130. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 08:06:10 UTC
From: samsvl@nlr.nl
Message-ID: <Xns93215C98A7CFCsamsvlnlrnl@137.17.128.14>
Source record: 37833

"zindazenda" <zen@lineisp.co.uk> wrote in
news:1045099113.775876@auth2.dns.griffin.net.uk:

> does anyone know of a uk supplier of 1000pf feed through (solder in)
> caps??
> need lots so cheaper the better.. surplus fine..
>
> thanks
>
> simon
>

Not in the UK, but great service at:
http://www.xs4all.nl/~barendh/Indexned.htm

Click on: DOORVOERCONDENSATOREN

and go to:
Doorv.C In te solderen vrijwel alle waarden 1-1000 pF en 47 nF
0.45 (Euro)

Sam

1131. MFJ 9020 Mods ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 09:36:51 UTC
From: Jaros&#65533;aw Misiak <jmisiak@opole.oip.pl>
Message-ID: <b2fovn$100$1@atlantis.news.tpi.pl>
Source record: 37834

Hello I am new owner of MFJ 9020 trx qrp. Looking for any mods descriptions.

73!
Jarek
sp6ojk

1132. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 10:19:27 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <+U9J8cIvE3S+EAXR@ifwtech.co.uk>
Source record: 37835

Sam Storm van Leeuwen wrote:
>"zindazenda" <zen@lineisp.co.uk> wrote in
>news:1045099113.775876@auth2.dns.griffin.net.uk:
>
>> does anyone know of a uk supplier of 1000pf feed through (solder in)
>> caps??
>> need lots so cheaper the better.. surplus fine..
>>
>> thanks
>>
>> simon
>>
>
>Not in the UK, but great service at:
>http://www.xs4all.nl/~barendh/Indexned.htm
>
>Click on: DOORVOERCONDENSATOREN
>
>and go to:
>Doorv.C In te solderen vrijwel alle waarden 1-1000 pF en 47 nF
>0.45 (Euro)

Of probeer http://www.xs4all.nl/~barendh/Indexeng.htm for the same in
English.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1133. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 12:47:24 UTC
From: "Christopher.Cox" <Administrator@127.0.0.1>
Message-ID: <3E4B93CF.80806@127.0.0.1>
Source record: 37836

L.L Electronics
(217)586-5327

Falconry Tracking Equipment.
30 miles in the air, about 3 on the ground (your cat).
Battery life on the beacon, 3 days.
Beacon transmits on 216.???, receiver is a cute little triple conversion
job, no AGC but very sensitive.

Regards

Jim Pennell wrote:

> Well, a device to attach to a cat poses some interesting problems. It
> has GOT to be very small and lightweight or else the cat will have problems.
> This means a very small battery, and no real antenna to speak of.
>
> So, considering cars, houses, and whatever between you and the cat, it
> will be nearly impossible to get any reasonable range out of it. Plus,
> the small battery means extremely limited operating time and a very low
> power transmit signal.
>
> To Triangulate on the signal, you'd need two base recievers and probably
> a portable unit too. Tracking RF to the degree of being able to find a cat
> is a time consuming business.
>
> --------------
>
> Some sort of transponder, which uses very little power until it gets a
> command signal might help the battery life, but even so the range would be a
> big problem.
>
> A radio transponder would need a reciever and a transmitter and a control
> ciruit. This all add's up to a physically bulky package and that isn't
> even thinking about the battery or any sort of antenna.
>
> You'd need to use a very high frequency to make a small antenna work with
> any degree of efficiency, and that all takes parts, space, and battery
> power.
>
> Not to mention probably being illegal, with an unliscensed radio
> transmitter....
>
> ==================
>

> Possibly some sort of acoustic system, which uses a microphone and an
> ultrasonic beeper could work to some degree.
>
> Still, no range, really. But if you walked, or possibly drove, around
> the neighborhood pulsing the command tone, the unit could 'hear' it and
> activate the ultrasonic beeper in response. You'd have to use directional
> microphones to track it down but it might work after a fashion.
>
> ==========
>
> All in all, this is NOT a simple tracking system you are asking for,
> particularly due to the limits on the size and weight due to having to be a
> reasonable thing to strap on a cat's collar, or some sort of harness.
>
> I suspect trying to make an electronic tracker of some sort will be
> extremely difficult, and much more trouble than it's worth.
>
> It's been my experience that a cat generally can't get lost easily. It
> may, or may not, choose to come home but they are rarely lost.
>
>
> Jim
>
>
>

1134. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 14:50:30 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <7mbn4vgb8jdneoeqlv27s93dqsulicrccl@4ax.com>
Source record: 37837

On 12 Feb 2003 17:24:05 -0800, aotemp@hotmail.com (x) wrote:

>what about the transponder idea? could that be a valid solution?

Some time back, I was noodling around with the idea of a switched reflector. The idea was to build a reflector with a switching diode which, while it's on would make a half wave reflector, and while it's off would merely present two separate quarter wave pieces which would not reflect much at all.

The idea with this switched reflector was to modulate the diode with information which would be retrievable via a Gunnplexer. This would be a low power device, it could be used to send data or to identify a target uniquely.

Using a reasonably small reflector and a low loss diode, you ought to be able to detect this unique transponder by looking for the modulation on the reflected signal. Small horns of this sort could be reasonably directive enough to play hot/cold and thus locate your cat.

Hey, I have a cat and I wonder about where he goes sometimes too. I might have to build one of these things up myself...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

1135. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 15:37:16 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <8fQ2a.2495$MD6.1113342@newsfep2-win.server.ntli.net>
Source record: 37840

> does anyone know of a uk supplier of 1000pf feed through (solder in)
> caps??
> need lots so cheaper the better.. surplus fine..
==========
Try Mainline Electronics - Leicester , sales@mainlinegroup.co.uk

Frank gm0csz.kn6wh@ntlworld.com

1136. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 15:42:38 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b2gee3$4rd$1@slb9.atl.mindspring.net>
Source record: 37838

"Christopher.Cox" <Administrator@127.0.0.1> Wrote:

> L.L Electronics
> (217)586-5327
>
> Falconry Tracking Equipment.
> 30 miles in the air, about 3 on the ground (your cat).
> Battery life on the beacon, 3 days.

Hmmm... I would tend to question their claim for the distance on the ground. At least in this sort of application. For a battery small enough to mount on a cat, and to last three days, the transmit power has GOT to be fairly weak.

Take a cordless phone, for example, think about how far it reaches outside the house. Keep in mind that the cordless phone is pretty big and bulky for something to place on a cat, and it's battery is good for maybe 2 hours talk time at most.

Now take the phone and lay it on the ground, behind two neighbor's houses and a couple of cars. No way will the signal reach.....

Cell phones don't count, they 'cheat' by placing the base station way up in the air to make the signal go up and ABOVE most ground structures. The increase in performance by getting one end of an RF link at a very high elevation is well known.

==========

As regards a cat tracker, the problem is the transmitter is VERY close to the ground, and has many walls, trees, cars to go through. Not to mention the fact the antenna will have to be physically short, and horizontal. Figuring in terms of something to put on a cat, the antenna has to be flexible, and lay along the body of the cat as some sort of harness.

This means the null of the antenna has a 50% chance of pointing towards the RDF unit carried by the person. Plus the antenna will be electrically short for the frequency range which also hurts it's efficiency.

So, all in all, making something small and light enough for a cat have any efficiency while still having enough power to overcome the terrain obstacles is not easy. I suspect that it's not possible.

The alternative is to wire the neighborhood with dozens of RX units hardwired back to your house. That way the cat may be in range of one of them in spite of the weak transmit signal. This could be made to work, but expensive and complex.

Jim

1137. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 15:56:01 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <nufn4vo431o7shdl43tdmbek6d7itjek57@4ax.com>
Source record: 37839

On Thu, 13 Feb 2003 09:50:30 -0500, Jake Brodsky <frussle@erols.com>
wrote:

>Hey, I have a cat and I wonder about where he goes sometimes too. I
>might have to build one of these things up myself...
>
Schroedinger had the same problem with his cat.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1138. 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 17:13:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b2gjki$1cdu4i$1@ID-150848.news.dfncis.de>
Source record: 37841
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Hi. Can anyone recommend a currently produced 2 meter convertor. Heck, I don't even know if these things are commercially made anymore. Last one I had was from Microwave Modules, but I cannot seem to locate a MM convertor on the web. Maybe I have to homebrew. TIA. Rich.

(Crossposted)

1139. Kilowatt Power Transformer FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 17:37:46 UTC
From: Jeffvolp@att.net
Message-ID: <86390c68.0302130937.34612a55@posting.google.com>
Source record: 37842

I have a large power transformer suitable for a kilowatt amplifier.
It outputs 870 volts at 1.13 amps, and would deliver close to 2000
volts with a voltage doubler. I bought it years ago with the intent
of building an amplifier, but that never happened. It is a
mil-quality gray cube that weighs 60 lbs, and is located near Boston.
Please e-mail me if interested.

Thanks, Jeff N1SSV

1140. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 18:03:50 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <z_Q2a.3149$%h4.963@fe01.atl2.webusenet.com>
Source record: 37843
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
> Hi. Can anyone recommend a currently produced 2 meter convertor.
> Heck, I don't even know if these things are commercially made
> anymore. Last one I had was from Microwave Modules, but I cannot seem
> to locate a MM convertor on the web. Maybe I have to homebrew. TIA.
> Rich.
>
> (Crossposted)

http://www.tentec.com/tk1210.htm

73 de W6DKN

1141. Re: Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 18:48:18 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <b2govjsqu1@newsg3.svr.pol.co.uk>
Source record: 37844

Hello
I was looking at the 140w amp, the EB63. Any opinions on that?
Regards
Don M5AKY
Bristol UK

1142. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 19:14:58 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b2gqoh$1c411n$1@ID-150848.news.dfncis.de>
Source record: 37845
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message
news:z_Q2a.3149$%h4.963@fe01.atl2.webusenet.com...
> Richard wrote:
> > Hi. Can anyone recommend a currently produced 2 meter convertor.
> > Heck, I don't even know if these things are commercially made
> > anymore. Last one I had was from Microwave Modules, but I cannot seem
> > to locate a MM convertor on the web. Maybe I have to homebrew. TIA.
> > Rich.
> >
> > (Crossposted)
>
> http://www.tentec.com/tk1210.htm
>
> 73 de W6DKN

Thanks. Well, maybe I could get what I want here. I just want a receive convertor. Probably one in the transvertor. Might sell me the convertor, perhaps, if it's suitable. Rich.

1143. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 19:43:08 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <3psn4v0lfuo19jlod575vteh04jig4v19p@4ax.com>
Source record: 37846
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi all,

I have a grid dip meter that dates back around 30 years. I decided to rip all the old guts out of it and replace the circuitry with something bang up to date. This has now been done and it works well enough, but it occurs to me that I really ought to finish the job properly by replacing the old analogue dial with a digital read-out. The problem with the old string-coupled dial is that the frequency read out is not necessarily the same as the device's output frequency; it's merely an approximation of it. To eliminate this problem, I'm intending to replace this arrangement with the guts of a frequency counter which will 'sniff' the RF from the osc and display its actual operating frequency. I can't see any snags with this idea, but thought I'd better run it past the Panel first, just in case. Any observations or suggestions?

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1144. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 19:55:05 UTC
From: kev <kev-news@dsbu.dotnet>
Message-ID: <3e4bf814$0$17934$fa0fcedb@lovejoy.zen.co.uk>
Source record: 37747
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

ROFLMAO!!!!

have you seen the address for ten-tec at the top of their web page????

1145. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 19:57:27 UTC
From: Seven Trees <dubya@dubya_dubya.com>
Message-ID: <MPG.18b609055dc459809896af@news.freeserve.com>
Source record: 37748
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

In article <3e4bf814$0$17934$fa0fcedb@lovejoy.zen.co.uk>, kev-news@dsbu.dotnet says...
> ROFLMAO!!!!
>
> have you seen the address for ten-tec at the top of their web page????
>
>
>

Good for Skate-boarding then ;-)

--
73

"Never wrestle with a pig:
You both get all dirty, and the pig likes it."

1146. Re: Small Wonders SW+ or Wilderness Radio SST?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 20:37:54 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v4o0hko14115d0@corp.supernews.com>
Source record: 37749
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

One big advantage of the SW+ series is that there are a large number of sites that use it as a tutorial example. If you plan to build it, and learn from the experience, it is the way to go. There also seem to be a lot more of them floating around, for whatever that's worth.

..

"bw@NOSPAMdidah.com" <bw1@NOSPAMcorecomm.net> wrote in message news:3E4ACB81.4118F925@NOSPAMcorecomm.net...
> I'm trying to determine which is the better radio, the Small Wonders SW+
> or Wilderness Radio SST? Does anyone here have an opinion?
>
> They are very similar. Perhaps this is splitting hairs. If you have
> built both then I'd like to hear your experience.
>
> Thanks for your help.
>
> Links:
> Small Wonders Labs: http://www.smallwonderlabs.com/
> Wilderness Radio: http://www.fix.net/~jparker/wild.html

1147. crap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 21:07:15 UTC
From: aotemp@hotmail.com
Message-ID: <26d721d9.0302131307.62400fa0@posting.google.com>
Source record: 37750

crap

1148. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 21:22:01 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <3vtn4vs6ubogjmj5o8f6g56krcb616uf0k@4ax.com>
Source record: 37751

On 12 Feb 2003 00:02:46 -0800, remove_ok1sip@atlas.cz (OK1SIP) opined
thusly:

>Look at http://w1.859.telia.com/~u85920178/use/gdo.htm
>
>73 de Ivan OK1SIP

Interesting, particularly if it works well up to the claimed top-end
frequency.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1149. "Son of Solid State Design"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 21:32:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4o3msdloqtk5e@corp.supernews.com>
Source record: 37752

The book Wes Hayward liked to call "Son of Solid State Design" -- an updated and expanded successor to _Solid State Design for the Radio Amateur_, is finally available. You can get more information at http://www.arrl.org/catalog/?item=8799.

Roy Lewallen, W7EL

1150. Re: 7.5V CT transformer at 51 Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 22:38:45 UTC
From: Skipp says dont spam me please <spammenot@yahoo.com>
Message-ID: <b2h6pl$6s$1@woodrow.ucdavis.edu>
Source record: 37753

Yes, there are people building very large amplifiers around... many talk
on the amps list server. Most would probably buy a custome made
transformer vs a surplus unit when you reach that power level.

cheers
skipp
http://sonic.ucdavis.edu

: da Valve <sabbatai_zvi@hotmail.com> wrote:
: I wonder if anyone ever builds anything in the way of a large RF
: amplifier using tubes that require this new iron that is surplus to my
: needs:

: 7.5V Filament Xfmr for a BIG RF amplifier project...
: Thordarson 21F26 Transformer. Top Quality.
: 115/230V AC Primary 50/60 Hz to 7.5 Volts C.T. at 51 Amps.
: Dimensions: 5" wide X 4.5" Deep X 4" tall
: Will sell for $110.00 plus shipping
: E-mail me for pictures

1151. Re: Solid state amplifier ;

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 22:41:08 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <8aV2a.35110$rq4.2663513@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37754

The EB63's biasing scheme is poor...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Don Vosper" <don@vosperd.freeserve.co.uk> wrote in message
news:b2govjsqu1@newsg3.svr.pol.co.uk...
> Hello
> I was looking at the 140w amp, the EB63. Any opinions on that?
> Regards
> Don M5AKY
> Bristol UK
>
>

1152. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 22:45:50 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b2h749$1cimeu$1@ID-150848.news.dfncis.de>
Source record: 37755
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b2gjki$1cdu4i$1@ID-150848.news.dfncis.de...
> Hi. Can anyone recommend a currently produced 2 meter convertor. Heck, I don't
> even know if these things are commercially made anymore. Last one I had was from
> Microwave Modules, but I cannot seem to locate a MM convertor on the web. Maybe I
> have to homebrew. TIA. Rich.
>
> (Crossposted)

I think actually I'd have more luck if I Googled with "transvertor". See if I could
just buy the rx bits.

1153. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 23:12:10 UTC
From: David Honey <David.Honey@nospam.thanks.com>
Message-ID: <3E4C264A.3050205@nospam.thanks.com>
Source record: 37756
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

kev wrote:

> ROFLMAO!!!!
>
> have you seen the address for ten-tec at the top of their web page????

I should imagine mountaineous terrain with twin peaks ;-)

1154. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 23:28:34 UTC
From: jgboyles@aol.com
Message-ID: <20030213182834.13903.00000301@mb-fu.aol.com>
Source record: 37757

>have you seen the address for ten-tec at the top of their web page????

Ten-Tec has been at that address for years. I have stopped by the facility
many times while vacationing in the mountains. Nice folks. What is so funny
about the address?
73 Gary N4AST

1155. Re: crap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-13 23:49:41 UTC
From: Allodoxaphobia <nobody@jonz.net>
Message-ID: <slrnb4oboj.gkj.nobody@animas.frontier.net>
Source record: 37758

On 13 Feb 2003 13:07:15 -0800, x hath writ:

> crap

Yep. That's was the smell test shows.

Jonesy W3DHJ

1156. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 03:09:21 UTC
From: Hank Oredson <horedson@att.net>
Message-ID: <B5Z2a.51211$zF6.3451795@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37759
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"David Honey" <David.Honey@nospam.thanks.com> wrote in message
news:3E4C264A.3050205@nospam.thanks.com...
> kev wrote:
>
> > ROFLMAO!!!!
> >
> > have you seen the address for ten-tec at the top of their web page????
>
>
> I should imagine mountaineous terrain with twin peaks ;-)

"Laura Palmer"

--

... Hank

Chaos, panic, and disorder - my work here is done.

Hank: http://horedson.home.att.net
W0RLI: http://w0rli.home.att.net

1157. Re: "Son of Solid State Design"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 04:19:27 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E4C6E4F.BBBB09F1@visi.com>
Source record: 37760

Roy Lewallen wrote:

> The book Wes Hayward liked to call "Son of Solid State Design" -- an
> updated and expanded successor to _Solid State Design for the Radio
> Amateur_, is finally available.

This book looks interesting. Is there any information as to which
author wrote which part(s)?

72
Bob WB0POQ

1158. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 04:33:38 UTC
From: "Christopher.Cox" <Administrator@127.0.0.1>
Message-ID: <3E4C7195.2020405@127.0.0.1>
Source record: 37761

Hi Jim,

The 'ground' distance test was my own. I laid the transmitter on the ground, in the grass, and took off in my car, stopping every so often to listen for the signal. I have had instances where reception problems occurred at .8 miles. The transmitter was laying in a furrow in a field. The beacon is a .1 second pulse every 1 to 2 seconds.

I used this tracking equipment in my high power rockets. I became a little upset with loosing $300 worth of equipment every time I lost sight of a rocket.

I tried a various 2 meter setups (CW), but none seemed to match the performance of a falconry tracker.

I do not use the equipment anymore. The feds are really clamping down on high power rocketry as a hobby. I broke a altitude record and went back to work programing computers and playing with electronics.

Regards

Jim Pennell wrote:

> "Christopher.Cox" <Administrator@127.0.0.1> Wrote:
>
>
>
>>L.L Electronics
>>(217)586-5327
>>
>>Falconry Tracking Equipment.
>>30 miles in the air, about 3 on the ground (your cat).
>>Battery life on the beacon, 3 days.
>>
>
>
> Hmmm... I would tend to question their claim for the distance on the
> ground. At least in this sort of application. For a battery small
> enough to mount on a cat, and to last three days, the transmit power has GOT
> to be fairly weak.
>
> Take a cordless phone, for example, think about how far it reaches
> outside the house. Keep in mind that the cordless phone is pretty big and
> bulky for something to place on a cat, and it's battery is good for maybe 2
> hours talk time at most.
>

> Now take the phone and lay it on the ground, behind two neighbor's houses
> and a couple of cars. No way will the signal reach.....
>
> Cell phones don't count, they 'cheat' by placing the base station way up
> in the air to make the signal go up and ABOVE most ground structures. The
> increase in performance by getting one end of an RF link at a very high
> elevation is well known.
>
> ============
>
> As regards a cat tracker, the problem is the transmitter is VERY close to
> the ground, and has many walls, trees, cars to go through. Not to mention
> the fact the antenna will have to be physically short, and horizontal.
> Figuring in terms of something to put on a cat, the antenna has to be
> flexible, and lay along the body of the cat as some sort of harness.
>
> This means the null of the antenna has a 50% chance of pointing towards
> the RDF unit carried by the person. Plus the antenna will be electrically
> short for the frequency range which also hurts it's efficiency.
>
> So, all in all, making something small and light enough for a cat have
> any efficiency while still having enough power to overcome the terrain
> obstacles is not easy. I suspect that it's not possible.
>
> The alternative is to wire the neighborhood with dozens of RX units
> hardwired back to your house. That way the cat may be in range of one of
> them in spite of the weak transmit signal. This could be made to work, but
> expensive and complex.
>
>
> Jim
>
>
>

1159. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 05:28:37 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9321DA798CC83pookster@216.168.3.50>
Source record: 37762
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:3psn4v0lfuo19jlod575vteh04jig4v19p@4ax.com:

> I have a grid dip meter that dates back around 30 years. I decided to
> rip all the old guts out of it and replace the circuitry with
> something bang up to date. This has now been done and it works well
> enough, but it occurs to me that I really ought to finish the job
> properly by replacing the old analogue dial with a digital read-out.
> The problem with the old string-coupled dial is that the frequency
> read out is not necessarily the same as the device's output frequency;
> it's merely an approximation of it. To eliminate this problem, I'm
> intending to replace this arrangement with the guts of a frequency
> counter which will 'sniff' the RF from the osc and display its actual
> operating frequency. I can't see any snags with this idea, but thought
> I'd better run it past the Panel first, just in case. Any observations
> or suggestions?
>

I wonder what your car looks like.

--
Bill, W7TI

1160. Re: crap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 05:29:08 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9321DA908A717pookster@216.168.3.50>
Source record: 37763

aotemp@hotmail.com (x) wrote in news:26d721d9.0302131307.62400fa0
@posting.google.com:

> crap
>

Noun or verb?

--
Bill, W7TI

1161. Re: "Son of Solid State Design"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 06:42:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4p3u9j4t0bf0d@corp.supernews.com>
Source record: 37764

Yes. Wes wrote chapters 1 through 7 and large parts of chapter 12. Rick wrote chapters 8, 9, and large parts of 12. Bob was the primary contributor to chapters 10 and 11, and wrote a section in chapter 12.

This is from the "About the Authors" section at the front.

Roy Lewallen, W7EL

Bob Liesenfeld wrote:
>
> Roy Lewallen wrote:
>
>
>>The book Wes Hayward liked to call "Son of Solid State Design" -- an
>>updated and expanded successor to _Solid State Design for the Radio
>>Amateur_, is finally available.
>
>
> This book looks interesting. Is there any information as to which
> author wrote which part(s)?
>
> 72
> Bob WB0POQ
>

1162. Re: Re: crap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 07:13:45 UTC
From: "Master of the universe and supreme ruler of all living beings (when my wife will let me!)" <john.smith@micro$oft.com>
Message-ID: <b2i461$53l$1@newstoo.ericsson.se>
Source record: 37765

> > crap
> Noun or verb?

I think he meant "carp" (a fish), but he is probably dsylxeic!

1163. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 07:15:27 UTC
From: "Master of the universe and supreme ruler of all living beings (when my wife will let me!)" <john.smith@micro$oft.com>
Message-ID: <b2i497$5a7$1@newstoo.ericsson.se>
Source record: 37766

http://www.bardwells.co.uk/

1164. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 07:27:46 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0302132327.3ea6e749@posting.google.com>
Source record: 37767

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in message
news:<3vtn4vs6ubogjmj5o8f6g56krcb616uf0k@4ax.com>...
> On 12 Feb 2003 00:02:46 -0800, remove_ok1sip@atlas.cz (OK1SIP) opined
> thusly:
>
> >Look at http://w1.859.telia.com/~u85920178/use/gdo.htm
> >
> >73 de Ivan OK1SIP
>
> Interesting, particularly if it works well up to the claimed top-end
> frequency.

Hi Paul,
if you want consultations about the article, you can post your
questions / opinions to http://ds.primasoft.bg/hhhmb/list.php?f=2 The
author Harry SM0VPO is not present just now, but I expect him to be
back soon and he will answer you.

73 de Ivan

1165. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 08:26:25 UTC
From: MalcolmdotHopkins@xtradotco.nz
Message-ID: <3e4ca3b8.34854984@news.xtra.co.nz>
Source record: 37768

"Jim Pennell" <NoSpam@killspam.com> wrote:

> "Christopher.Cox" <Administrator@127.0.0.1> Wrote:
>
>
>> L.L Electronics
>> (217)586-5327
>>
>> Falconry Tracking Equipment.
>> 30 miles in the air, about 3 on the ground (your cat).
>> Battery life on the beacon, 3 days.
>
>
> Hmmm... I would tend to question their claim for the distance on the
>ground. At least in this sort of application. For a battery small
>enough to mount on a cat, and to last three days, the transmit power has GOT
>to be fairly weak.
>
> Take a cordless phone, for example, think about how far it reaches
>outside the house. Keep in mind that the cordless phone is pretty big and
>bulky for something to place on a cat, and it's battery is good for maybe 2
>hours talk time at most.
>
> Now take the phone and lay it on the ground, behind two neighbor's houses
>and a couple of cars. No way will the signal reach.....
>
> Cell phones don't count, they 'cheat' by placing the base station way up
>in the air to make the signal go up and ABOVE most ground structures. The
>increase in performance by getting one end of an RF link at a very high
>elevation is well known.
>
>============
>
> As regards a cat tracker, the problem is the transmitter is VERY close to
>the ground, and has many walls, trees, cars to go through. Not to mention
>the fact the antenna will have to be physically short, and horizontal.
>Figuring in terms of something to put on a cat, the antenna has to be
>flexible, and lay along the body of the cat as some sort of harness.
>
> This means the null of the antenna has a 50% chance of pointing towards
>the RDF unit carried by the person. Plus the antenna will be electrically
>short for the frequency range which also hurts it's efficiency.
>
> So, all in all, making something small and light enough for a cat have

>any efficiency while still having enough power to overcome the terrain
>obstacles is not easy. I suspect that it's not possible.
>
> The alternative is to wire the neighborhood with dozens of RX units
>hardwired back to your house. That way the cat may be in range of one of
>them in spite of the weak transmit signal. This could be made to work, but
>expensive and complex.
>
>
> Jim
>
>
This may be a solution.

A guy involved in Mountain and Bush Rescue (NZ) has devised a system to locate lost, missing or injured people. The Rescue people use dogs, which is a highly successful method but sometimes the dogs find the victim but are unable to get the rescuers to the spot. Does the dog stay with the victim and try and attract the rescuers or go back to the rescuers and try and retrace his track as he (the dog) can't actually give them a location ie: doesn't know the postion and cannot talk.

What they have done is make a coat for the dog that has a locator beacon (Transmitter) and a GPS in special pockets. The dog handler sends the dog off with the GPS on, and when the dog finds the victim he (the dog) is trained to pull a tag from the pocket. This does two things (a) the Locator beacon is attached to the tag, and is turned on when pulled out, the dog drops this by the victim. This can be located with a directional antenna and receiver. (b) This is the clever part, when the dog pulls the tag and beacon out, this also triggers the GPS into marking a "waypoint" at the spot. The dog now retraces his track to his handler who can now see the dogs track on the GPS and the victim is at the waypoint position. They can now use the "retrace track" function of the GPS to get to the Victim. They can also use the beacon to further aid location.

One could get the smallest and lighest GPS that has a track capability and attach it to the cat, and when it returns have a look at track log. Can even be displayed on some PC GPS mapping programs in real or accelerated time. I use Oziexplorer, a really excellant program for the cost (I have no connection with product, financial or otherwise, just a satisfied user).

Malcolm Hopkins
Wellington
New Zealand

Please remove "dot" (2) from address to reply

1166. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 09:27:25 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e4cb5d8.1156289@news.freeserve.net>
Source record: 37769

On Tue, 11 Feb 2003 02:41:18 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>Put some notes about dip meters on my page
>http://www.laud.no/la6nca/la8ak/la8ak/5.htm
>will provide some more text later
>
another site about GDO's
http://www.qsl.net/m3msm/gdo/gdo.htm

1167. Greenland radio amateurs!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 09:37:09 UTC
From: Ben Veen <ben_veen@Hotmail.com>
Message-ID: <b2idb9aej1@news.tudelft.nl>
Source record: 37770

Hi,

What are the possibilities of transferring data in the area of greenland? I am especially interested in amateur networks. Any suggestions?

Ben

1168. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 11:57:54 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <eC53a.627$gH1.74676@newsfep1-win.server.ntli.net>
Source record: 37772
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

> Hi. Can anyone recommend a currently produced 2 meter convertor. Heck,
I don't
> even know if these things are commercially made anymore. Last one I had
was from
> Microwave Modules, but I cannot seem to locate a MM convertor on the web.
Maybe I
> have to homebrew. TIA. Rich.
==========
Rich , I do have a new ,'never used' Microwave Modules 144 MHz to 28 MHz
converter with output for a transverter.
Since I recently acquired a 144 MHz and 430MHz transverter for an existing
HF transceiver , I no longer have a need for the MM converter.
If you are interested ,please let me know

73 Frank gm0csz.kn6wh@ntlworld.com

Note : All SPAM to the above address is rejected by 'Mailwasher'
www.mailwasher.com
Mailwasher ,a free prog . , removes all SPAM
hassle.....I can recommend it !

1169. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 12:30:50 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3E4CE241.1A9F7E7E@uwe.ac.uk>
Source record: 37771
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b2gjki$1cdu4i$1@ID-150848.news.dfncis.de...
> > Hi. Can anyone recommend a currently produced 2 meter convertor. Heck, I don't
> > even know if these things are commercially made anymore. Last one I had was from
> > Microwave Modules, but I cannot seem to locate a MM convertor on the web. Maybe I
> > have to homebrew. TIA. Rich.
> >
> > (Crossposted)
>
> I think actually I'd have more luck if I Googled with "transvertor". See if I could
> just buy the rx bits.

Try http://members.lycos.co.uk/spectrum/

They may have just what you need.
E.g. http://members.lycos.co.uk/spectrum/amateur.htm#RECEIVE_CONVERTERS

I have a 6 to 2(IF) transverter and it works well. They do receive only ones.

vy 73

Andy, M3ABC

1170. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 12:59:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b2ip4c$1d5nfj$1@ID-150848.news.dfncis.de>
Source record: 37773
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"Andy Cowley" <andy.cowley@uwe.ac.uk> wrote in message
news:3E4CE241.1A9F7E7E@uwe.ac.uk...
> Richard wrote:
> >
> > "Richard" <nearlynews_email@ntlworld.com> wrote in message
> > news:b2gjki$1cdu4i$1@ID-150848.news.dfncis.de...
> > > Hi. Can anyone recommend a currently produced 2 meter convertor. Heck, I
don't
> > > even know if these things are commercially made anymore. Last one I had was
from
> > > Microwave Modules, but I cannot seem to locate a MM convertor on the web. Maybe
I
> > > have to homebrew. TIA. Rich.
> > >
> > > (Crossposted)
> >
> > I think actually I'd have more luck if I Googled with "transvertor". See if I
could
> > just buy the rx bits.
>
> Try http://members.lycos.co.uk/spectrum/
>
> They may have just what you need.
> E.g. http://members.lycos.co.uk/spectrum/amateur.htm#RECEIVE_CONVERTERS
>
> I have a 6 to 2(IF) transverter and it works well. They do receive only ones.
>
> vy 73
>
> Andy, M3ABC

Brill.

It does help if I spell converter correctly. :c)

1171. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 15:28:25 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.98ac414bc4.a80320igor@argonet.co.uk>
Source record: 37781

In article <nufn4vo431o7shdl43tdmbek6d7itjek57@4ax.com>, Gary S.
<Idontwantspam@net> wrote:
> Hey, I have a cat and I wonder about where he goes sometimes too. I
> >might have to build one of these things up myself...
> >
> Schroedinger had the same problem with his cat.

Well, he should have had a torch.

What would be wrong with an L.E.D.,pulsed to flash every few seconds and two
pairs of eyes and the locating device, one to say "There he is"" and the
other to say "But you can't go in someone else's garden!" ?
Regards, G.H.Ireland.

--

__ __ __ __ __ ___ ____
|__||__)/ __/ \|\ ||_ | /
| || __/__/| \||__ | /...Internet access for all Acorn RISC machines
_____________________________/ igor@argonet.co.uk

1172. Ham radio mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 15:38:29 UTC
From: Daniel Hicks <w8mmq-NOSPAM@email.com>
Message-ID: <v4q3hcp5u7h1b0@corp.supernews.com>
Source record: 37775

W8MMQ Radio Mods Page
http://www.w8mmq.com/mods/

Over 1,200 radio mods listed, as well as other mod sites from around the internet. This page is updated often.

1173. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 15:39:21 UTC
From: Alun Palmer <elektros@yahoo.com>
Message-ID: <Xns93226C54F7910elektrosmdonet@130.133.1.4>
Source record: 37774
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in
news:b2gjki$1cdu4i$1@ID-150848.news.dfncis.de:

> Hi. Can anyone recommend a currently produced 2 meter convertor.
> Heck, I don't even know if these things are commercially made anymore.
> Last one I had was from Microwave Modules, but I cannot seem to locate
> a MM convertor on the web. Maybe I have to homebrew. TIA. Rich.
>
> (Crossposted)
>

I don't know if it's still in production, but Tokyo Hy-Power used to do a
5-band transverter, i.e. 80, 40, 20, 15 and 10 from a 2m exciter. I don't
know if they currently have an importer, but I understand they are happy
to send equipment to customers direct from the factory in Japan.

1174. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 17:10:14 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <EaRyXpI2LST+EwZ6@fslife.co.uk>
Source record: 37776

Fred,

>Unless, of course, one is willing to insure adequate bandwidth for
>transmission and reception and to incorporate a hang AGC in which case
>there's no difference at all except with single sideband we have the
>absence of an unwanted, unused sideband, the absence of an unwanted,
>annoying, power wasting and generally useless carrier, and, of course,
>the incredible reduction in power consumption for a given speech
>transmissibility. Remember AM doesn't stand for Antique Modulation,
>it stands for Antisocial Modulation.

Current solid state technology allows PWM rigs to have an overall
efficiency percentage in the mid 80's.

Used with a decent limiter there's no reason to cause anyone
interference.

Try it sometime, you may like it.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1175. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 17:12:57 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <Tqq3rjJZOST+Ew5t@fslife.co.uk>
Source record: 37777

Si,

>>> does anyone know of a uk supplier of 1000pf feed through (solder in)
>>> caps??
>>> need lots so cheaper the better.. surplus fine..

How about Sycom in Surrey?
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1176. FS Ad: Electronic Parts incl. TIL311 Hex Displays, LEDs and TTL Chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 17:52:28 UTC
From: centralub@yahoo.com
Message-ID: <7575c2d5.0302140952.51291b48@posting.google.com>
Source record: 37778
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.homebrew,uk.radio.amateur

All prices are in US Funds, for Price comparisons
from up to 20 distributors on these parts visit:
http://www.findchips.com

QTY. Part # Unit Price Description
---- --------- ---------- -----------
OPTO.
~400 Green LED $0.10 ea. 5mm Diameter,

~500 Green LED $0.10 ea. Rectangular 5mm x 2mm face/lens

10,200 Red LED $0.10 ea. 5mm Diameter, Sharp P/N: GL5PR4
$18 per bag of 250 ($0.07 each) and
$100 per box of 2000 ($0.05 each)

106 MAN-6440 $0.95 ea. Dual Digit, Green 7 Segment display,
0.56" tall character, Common Cathode
$15 per tube of 20 ($0.75 each)

85 FND-6740 $0.95 ea. Dual Digit, Red 7 Segment display,
0.56" tall character, Common Cathode
$15 per tube of 20 ($0.75 each)

137 TIL-311 $7.00 ea. The TI TIL311 is a Hexadecimal Dot
Matrix Display with integral TTL driver
electronics to accept, store & display
4-bit binary data, Epoxy package

8 TIL-311A $7.00 ea. The TI TIL311A is a Hexadecimal Dot
Matrix Display with integral TTL driver
circuit to accept, store & display
4-bit binary data, Plastic package

For a copy of the TIL311 Datasheet see:
http://www-s.ti.com/sc/ds/til311.pdf and it is mirrored at
http://umwnt1.physics.lsa.umich.edu/mttc/images/til311.pdf

TTL CHIPS, DIP Package

550 7407N $0.18 ea. $4.00 per tube of 25 ($0.16 each)
Hex Non-Inverted Buffer with
Open-Collector outputs

605 74ALS20AN $0.19 ea. $4.00 per tube of 25 ($0.16 each)
Dual 4-Input Positive NAND Gates

240 74ALS27AN $0.19 ea. $4.00 per tube of 25 ($0.16 each)
Triple 3-Input Positive NOR Gates

1350 74LS74AN $0.25 ea. $5.00 per tube of 25 ($0.20 each)
Dual D-Type Positive Edge-triggered
Flip-Flops with Preset and Clear.

100 74ALS74AN $0.25 ea. $5.00 per tube of 25 ($0.20 each)
Dual D-Type Positive Edge-triggered
Flip-Flops with Preset and Clear.

RESISTORS
55,000 100 Ohm, 5%, 1/4 Watt Carbon film resistor, $2 per 100,
$20 per box of 5000 or
$150 for 50,000 pieces.

4,000 220 Ohm, 5%, 1/4 Watt Carbon film resistor, $2 per 100,
$16 per box of 4000 or

4,000 680 Ohm, 5%, 1/4 Watt Carbon film resistor, $2 per 100,
$16 per box of 4000 or

My e-mail: centralub@yahoo.com

Minimum purchase $5.

No shipping is included in the above prices. To quote you a
total including shipping, I require your full ZIP code or
postal code in addition to a list of what you are interested
in. Please specify the country for international orders
outside of North America.

The only part that I will ship for $3 to anywhere in the US
and Canada are the 100 packs of resistors. So a pack of 100
resistors is $5 inclusive shipping.

All electronic parts are new. All semi-conductors are stored
in anti-static tubes/bags or on anti-static foam if you purchase
less than a tube/bag. Below is the complete listing of all parts.

Offers on the lot are welcome. Keep in mind that I am looking
for a price below wholesale, but more than the commercial buyers
of surplus electronic parts are offering.

1177. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 18:04:06 UTC
From: Terry King <terry@fredking.us>
Message-ID: <MPG.18b6f9a5569a18f989751@news.newsguy.com>
Source record: 37779
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

> I really ought to finish the job
> properly by replacing the old analogue dial with a digital read-out.

I've done this with a separate link and a sensitive counter, and
it IS nice to know the 'real' frequency. Nice when you're using it as
a poor-man's signal generator, too.

Since you're inside it, just add one more FET follower and
a cable output, with a small but unchanging coupling cap.

--
Regards, Terry King ...In The Woods In Vermont
terry@fredking.us
The one who Dies With The Most Parts LOSES!! What do you need?

1178. Re: Help Needed to ID MOSTEK Part

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 19:05:18 UTC
From: donrm@soco.agilent.com
Message-ID: <1045258518.332554@cswreg.cos.agilent.com>
Source record: 37780

Brad <alihernlem@hotmail.com> wrote:
> Anyone recognize a round metal can 10-pin part bearing the markings?:
>
> MOSTEK
> MK6057L
> 1818-0048
>
> I think that the last number MIGHT be an HP number.

It is, and it's a PMOS ROM, contents unknown.

Don Montgomery
donrm@soco.agilent.com

1179. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-14 23:38:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3e4d517e.165558578@news.online.no>
Source record: 37782

On Fri, 14 Feb 2003 09:27:25 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>On Tue, 11 Feb 2003 02:41:18 GMT, la8ak.xnd@online.no (J M Noeding)
>wrote:
>
>>Put some notes about dip meters on my page
>>http://www.laud.no/la6nca/la8ak/la8ak/5.htm
>>will provide some more text later
>>
>another site about GDO's
>http://www.qsl.net/m3msm/gdo/gdo.htm
very well, but since it is so many sites where the conventional
constructions are repeated, I want to show something different. Most
home-constructors have a signal generator, usually quite accurate, and
it is no reason not using this instead of building a new GDO and have
to calibrate it - complete waste of time and ressources

JM
--
remove ,xnd to reply

1180. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 00:37:18 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <0A188E23A4FFD18A.8DA8F4C76EDED6B7.2386930C6DB751BD@lp.airnews.net>
Source record: 37783

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote:
>Current solid state technology allows PWM rigs to have an overall
>efficiency percentage in the mid 80's.
I know; I've spent my life in the biz. The last 600 kW I built had an overall efficiency of over 83%. But it was for broadcasting, not amateur communications.
>Used with a decent limiter there's no reason to cause anyone
>interference.
I wonder whether the use of the word decent was a Freudian slip since the use of "Antisocial Modulation" at this stage of the hobby is a decent into a world of excessive bandwidth and low transmission efficiency.

Fred, W8OY
jfriley@ieee.nospam.org

1181. FA: Unusual HV Bandswitch for Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 00:40:52 UTC
From: RF_AUDIO@collectiblehelp.com
Message-ID: <f3d277fb.0302141640.5573e2ad@posting.google.com>
Source record: 37784

Group,
Here is a HV ceramic bandswitch from a 1kw homebrew rf amplifier. I
think it will go cheap. It is from an SK estate I bought. Maybe
somebody here can use it.
See http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3007727544&rd=1

Tnx for looking,
ac6ts
www.collectiblehelp.com

1182. TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 01:04:39 UTC
From: Jim Rayburn <kc4bqk@insightbb.com>
Message-ID: <Hmg3a.103460$SD6.5707@sccrnsc03>
Source record: 37785

I have a TS-830 that when in cw and you transmit the freq goes up by
00.000.8 every time. It does not do it in tune or USB/LSB. I was wondering
if someone else had this problem and a quick fix.
Thanks
Jim
KC4BQK

1183. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 01:48:51 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <ntudncW9F8urNtCjXTWcqQ@ctc.net>
Source record: 37786

> I have a TS-830 that when in cw and you transmit the freq goes up by
> 00.000.8 every time. It does not do it in tune or USB/LSB. I was wondering
> if someone else had this problem and a quick fix.
> Thanks
> Jim
> KC4BQK
>

Are you sure that is not the way it is suspose to work to generate an 800 hz
tone on a receiver set to the same frequency as the ts-830 ?

1184. hundreds of NOS and used tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 03:06:37 UTC
From: arfmonger <myspam@yahoo.com>
Message-ID: <19i3a.116278$Ec4.95970@rwcrnsc52.ops.asp.att.net>
Source record: 37788
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

hundreds of used tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2158858942
currently at $20.50

hundreds of NOS tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2158876576
no bids yet. 1st bid at $24.99

1185. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 03:36:32 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322C7792808Cpookster@216.168.3.50>
Source record: 37789

Prefered Customer <jfriley@no.thanks.ieee.org> wrote in
news:0A188E23A4FFD18A.8DA8F4C76EDED6B7.2386930C6DB751BD@lp.airnews.net:

> the use of "Antisocial Modulation" at this stage of the hobby is a
> decent into a world of excessive bandwidth and low transmission
> efficiency.
>

Fred, you still haven't described the nature of this particular bug up
your ass. We're still curious why you're beating this particular
deceased equine.

--
Bill, W7TI

1186. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 03:57:01 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <hUi3a.4809$4y4.2483859@newssvr28.news.prodigy.com>
Source record: 37787

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:ntudncW9F8urNtCjXTWcqQ@ctc.net...
> > I have a TS-830 that when in cw and you transmit the freq goes up by
> > 00.000.8 every time. It does not do it in tune or USB/LSB. I was
wondering
> > if someone else had this problem and a quick fix.
> > Thanks
> > Jim
> > KC4BQK
> >
>
> Are you sure that is not the way it is suspose to work to generate an 800
hz
> tone on a receiver set to the same frequency as the ts-830 ?

Yes that is exactly the way it is supposed to work. Radios of this
generation actually showed the difference between the 800hz received tone
and the transmit frequency. In newer radios, the manufacturers have
programmed them simply to show one frequency. Apparently they feel this is
less confusing.

Dee Flint, N8UZE

1187. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 04:19:05 UTC
From: Jim Rayburn <kc4bqk@insightbb.com>
Message-ID: <Zcj3a.105206$SD6.5772@sccrnsc03>
Source record: 37790

Thanks I got the answer I need.
Thanks
Jim

"Jim Rayburn" <kc4bqk@insightbb.com> wrote in message
news:Hmg3a.103460$SD6.5707@sccrnsc03...
> I have a TS-830 that when in cw and you transmit the freq goes up by
> 00.000.8 every time. It does not do it in tune or USB/LSB. I was wondering
> if someone else had this problem and a quick fix.
> Thanks
> Jim
> KC4BQK
>
>

1188. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 04:58:46 UTC
From: robrk <robrkx@nidhog.net>
Message-ID: <3E4DC906.9D8E447E@nidhog.net>
Source record: 37791
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

http://www.hamtronics.com/

1189. FA:9 possition HV Ceramic Rotary Tuner switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 13:59:55 UTC
From: RF_AUDIO@collectiblehelp.com
Message-ID: <f3d277fb.0302150559.5b284081@posting.google.com>
Source record: 37792

Group,

Here is a Mil spec 9 possition dual section rotary bandswitch. Ceramic
with very stiff contact tension.
This also will probably go cheap. I had a box of them and the quality
is outstanding.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3007729541&rd=1

Thanks for looking,
ac6ts
www.collectiblehelp.com

1190. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:26:54 UTC
From: w4pqwhs@aol.com
Message-ID: <20030215092654.24735.00000312@mb-fw.aol.com>
Source record: 37793

Double check the owners manual,I think that is normal for CW...thats so your contact will have a CW note when receiving your signal. W4PQW

1191. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:41:08 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <ivhs4v8uv40atlgmvpoi0fjrkckh4d99qe@4ax.com>
Source record: 37794

On Fri, 14 Feb 2003 18:37:18 -0600, Prefered Customer
<jfriley@no.thanks.ieee.org> opined thusly:

>The last 600 kW I built had an
>overall efficiency of over 83%. But it was for broadcasting, not
>amateur communications.

I for one am relieved to hear it!
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1192. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:41:09 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <24is4v4s061bn7507dfcsoalgpvuq4a8lk@4ax.com>
Source record: 37795

On Fri, 14 Feb 2003 23:38:41 GMT, la8ak.xnd@online.no (J M Noeding)
opined thusly:

>On Fri, 14 Feb 2003 09:27:25 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:
>
>>On Tue, 11 Feb 2003 02:41:18 GMT, la8ak.xnd@online.no (J M Noeding)
>>wrote:
>>
>>>Put some notes about dip meters on my page
>>>http://www.laud.no/la6nca/la8ak/la8ak/5.htm
>>>will provide some more text later
>>>
>>another site about GDO's
>>http://www.qsl.net/m3msm/gdo/gdo.htm
>very well, but since it is so many sites where the conventional
>constructions are repeated, I want to show something different. Most
>home-constructors have a signal generator, usually quite accurate, and
>it is no reason not using this instead of building a new GDO and have
>to calibrate it - complete waste of time and ressources

Indeed? And how do you propose getting a decent 'dip' from a
conventional signal generator? Their output impedance simply isn't
high enough.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1193. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:41:10 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <ldis4vsgm8bkjl5npnm5gukc2p7g7um3bg@4ax.com>
Source record: 37796
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 14 Feb 2003 05:28:37 -0000, "Bill, W7TI" <jamspam@upyours.now>
opined thusly:

>I wonder what your car looks like.

It's a rather splendid old Red Label Bentley, but because it was a bit
old fashioned, I've ripped all the guts out of it and replaced it with
Lexus running gear. :-)

1194. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:41:11 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <2gis4voi7mju7vq6lu68h4gg2l5jcscq29@4ax.com>
Source record: 37647
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 14 Feb 2003 13:04:06 -0500, Terry King <terry@fredking.us>
opined thusly:

>Since you're inside it, just add one more FET follower and
>a cable output, with a small but unchanging coupling cap.

Terry, from your woods in Vermont, would you care to explain what
advantages come from adding these bits? Thanks.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1195. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 14:41:16 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <pgjs4vct5qousd2mfeas5u4klonjpq5fgv@4ax.com>
Source record: 37648
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 14 Feb 2003 13:04:06 -0500, Terry King <terry@fredking.us>
opined thusly:

>> I really ought to finish the job
>> properly by replacing the old analogue dial with a digital read-out.
>
>I've done this with a separate link and a sensitive counter, and
>it IS nice to know the 'real' frequency. Nice when you're using it as
>a poor-man's signal generator, too.
>
>Since you're inside it, just add one more FET follower and
>a cable output, with a small but unchanging coupling cap.

Ignore my previous posting, Terry. Barry's just answered my query.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1196. Re: Upgrading a grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 15:06:36 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93234853C3E82pookster@216.168.3.50>
Source record: 37649
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge <redscar@waitrose.notthisbit.com> wrote in
news:ldis4vsgm8bkjl5npnm5gukc2p7g7um3bg@4ax.com:

>>I wonder what your car looks like.
>
> It's a rather splendid old Red Label Bentley, but because it was a bit
> old fashioned, I've ripped all the guts out of it and replaced it with
> Lexus running gear. :-)
>
>

An admirable conversion. I tip my hat to you, sir. :-)

--
Bill, W7TI

1197. Re: Greenland radio amateurs!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 15:54:01 UTC
From: hexter@blazenet.net
Message-ID: <v4sokptnod6u22@corp.supernews.com>
Source record: 37650

In article <b2idb9aej1@news.tudelft.nl>, ben_veen@Hotmail.com says...
>
>Hi,
>
>What are the possibilities of transferring data in the area of greenland? I
>am especially interested in amateur networks. Any suggestions?
>
>Ben
>
>

I would be curious as to a good answer to this also. It is hard just to find some amatuer activity on Greenland. Data, what type of data do you want to transfer? 300 baud lowband amtor, or similar is going to be the extent of 'live' data transfer. So much for that 30 megabyte file hehehe. Greenland does have some internet transfer capability (mostly via satallite telcom links). Would be nice to find some M.A.R.S. operators on a regular sched though!

1198. Re: Greenland radio amateurs!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 17:06:18 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e4e7362$0$122$edfadb0f@dtext02.news.tele.dk>
Source record: 37651

Hello Ben

> What are the possibilities of transferring data in the area of greenland?
I
> am especially interested in amateur networks. Any suggestions?

Try the Ham klub on Greenland http://www.ox3nuk.vind.gl/

73 de Max

1199. FS: Spkr/patch, CW filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 17:50:40 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <hmWdnYzIO4QxFNOjXTWcoQ@cnmnetwork.com>
Source record: 37652
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Yaesu speaker/telephone patch, matches FT-101 series. With manual. $85 shipped to lower 48.

Kenwood YK-88C-1 500 Hz CW filter for most Kenwood rigs. $80 shipped to lower 48.

Pictures available.

73, Bob K6DDX

1200. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 20:53:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3e4e6181.2969856@news.online.no>
Source record: 37653

On Sat, 15 Feb 2003 14:41:09 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>>it is no reason not using this instead of building a new GDO and have
>>to calibrate it - complete waste of time and ressources
>
>Indeed? And how do you propose getting a decent 'dip' from a
>conventional signal generator? Their output impedance simply isn't
>high enough.

Suggest you should try to understand the information in a schematic,
instead of posting silly remarks to the different posters you find

--
remove ,xnd to reply

1201. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 21:28:52 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <83ct4vgi2sk2l8a7aeub2k88osrcag4plf@4ax.com>
Source record: 37654

On Sat, 15 Feb 2003 20:53:45 GMT, la8ak.xnd@online.no (J M Noeding)
opined thusly:

>Suggest you should try to understand the information in a schematic,
>instead of posting silly remarks to the different posters you find

Suggest you stick to the question: how are you going to get a decent
dip from a conventional signal generator?

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1202. Question on dual-gate MOSFETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 21:29:24 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <38ct4v8nhi1t1eatchrd89rt8547cpq5hh@4ax.com>
Source record: 37655

If I plan to use only one gate of a DGM., which gate should I use? Or
can I use either?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1203. Source for FS6370 PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 22:12:53 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EBB65.4030006@bellsouth.net>
Source record: 37656

Does anybody know where I can purchase 1 or 2 pieces of
an AMI semi FS6370 or FS6377 PLL chip?

1204. Re: Question on dual-gate MOSFETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 22:19:20 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EBCE8.5050203@bellsouth.net>
Source record: 37657

Paul Burridge wrote:
> If I plan to use only one gate of a DGM., which gate should I use? Or
> can I use either?

Either connect BOTH gates together (mind the input C) or ground gate 2
and use gate 1.

There may be some advantage to connecting gate 2 (bypassed to ground with a
suitable capacitor) to a positive bias. (depends on the fet and the desired
operating point).

1205. need spec sheet for CA3035

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 22:32:30 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EBFFE.9090705@bellsouth.net>
Source record: 37658

Does anyone have a copy of a spec sheet for the RCA
CA3035 op amp?

These were used in the TenTec PM1 and Heath HW7, maybe the HW8 and PM2
and 3 as well.

1206. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 22:36:54 UTC
From: Chuck Chunder <See.Message.Text@ToReply.com>
Message-ID: <3e4ececb$0$9537$afc38c87@news.optusnet.com.au>
Source record: 37661

"Bob Lewis (AA4PB)" wrote in message

> The op notes on most of these devices recommend using a diode from
> input to output in order to guard against shorting the internal pass
> transistor when the input drops to zero and the output has large
> capacitors across it. Few designers appear to use this diode.

Shouldn't that be "diode from Output to Input" ?

1207. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 23:16:19 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4ECA43.3080807@bellsouth.net>
Source record: 37659

Jim Adney wrote:
> On Fri, 31 Jan 2003 23:24:06 GMT "Doug" <dougmelissa@tm.net> wrote:
>
>
>>Is this tantamount to the fact that the current output
>>of the xtal set is limited and that if R is too low the 'theoretical'
>>current
>>per ohm's law (i=V/R) exceeds the capacity of the xtal set?
>>If that is the case (and my guess is that I'm way off base here),
>>then a resistor in series with speaker should work, right.
>
>
> That's a reasonable way to put it.
>
> Adding a resistor in series would keep you from drawing too much
> current from the set, but then you only get a fraction of the total
> available power into the speaker; the rest is wasted in the resistor.
> The goal is to get it all into the speaker.
>
> OTOH, I have no idea where one might find a 2000 ohm speaker. 2000 ohm
> headphones used to be available and this was what was commonly used in
> crystal sets. Your best bet for finding such a pair today is probably
> at a swap meet.
>

Antique Radio supply (www.tubesandmore.com) has them. BION they
are still being made.

1208. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-15 23:21:49 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4ECB8D.6080608@bellsouth.net>
Source record: 37660

Doug wrote:
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug
>
>

Normally a crystal set can't recover enough signal to drive a speaker directly no matter how you try and match the speaker to the radio. Even if you had a speaker with a 2000 ohm voice coil (actually a headphone element attached to a speaker cone) there wouldn't be enough signal to hear very far from the speaker.

OTOH if you live near a local am transmitter the signal can get quite loud. In fact that may be the ONLY station you hear. I used to live a few miles from
a 5KW am station, and it's signal WOULD drive a small speaker from a crystal set. (If I lived any closer, the signal might have driven a small CAR).

1209. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 00:29:48 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <j7lt4vcuj1fr0n3q6ddd5l0a3f3pro742d@4ax.com>
Source record: 37662

On Sat, 15 Feb 2003 18:21:49 -0500, kenneth scharf
<wa2mze@bellsouth.net> opined thusly:

>OTOH if you live near a local am transmitter the signal can get quite loud.
>In fact that may be the ONLY station you hear. I used to live a few
>miles from
>a 5KW am station, and it's signal WOULD drive a small speaker from a
>crystal set. (If I lived any closer, the signal might have driven a
>small CAR).

Hehe! I once lived about 4 miles from the BBC World Service (600KW
output). I built a crystal set as a kid, but this was the only thing I
could pick up on it. I later discovered that you could actually pick
up this station on just about anything, due to the intensity of the
signal strength at that small distance. Even ordinary household
objects would start acting as detectors on some days!

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1210. Re: feed through caps UK source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:09:52 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045357793.6822@auth2.dns.griffin.net.uk>
Source record: 37663

thanks to all that replyed
simon
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1045099113.775876@auth2.dns.griffin.net.uk...
> does anyone know of a uk supplier of 1000pf feed through (solder in)
> caps??
> need lots so cheaper the better.. surplus fine..
>
> thanks
>
> simon
>
>

1211. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:24:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3e4ee832.37456439@news.online.no>
Source record: 37664

On Sat, 15 Feb 2003 21:28:52 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Sat, 15 Feb 2003 20:53:45 GMT, la8ak.xnd@online.no (J M Noeding)
>opined thusly:
>
>>Suggest you should try to understand the information in a schematic,
>>instead of posting silly remarks to the different posters you find
>
>Suggest you stick to the question: how are you going to get a decent
>dip from a conventional signal generator?
>
suppose you mean 2000 ohm is so low impedance that it won't work?

--
remove ,xnd to reply

1212. Re: WTB: 300 BAUD S-100 bus modem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:30:15 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EE9A7.4040608@bellsouth.net>
Source record: 37665
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Alan wrote:
> I'm looking for any brand of S-100 bus modem, circa 1970'ish. If you have
> one, send me an email. Thanks. Alan
>
>

Did they even make modems for the s100 bus? I think I still have
an old 300 baud modem with an accoustic coupler (you know the kind
you put the phone handset into). Assuming I can find it, I'd let it go for
the cost of mailing it.

1213. ferrite rods wtb

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:33:39 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v4tqkhr7apv25c@corp.supernews.com>
Source record: 37666

Anyone have any long, 6 inch or longer ferrite rods they've salvaged from
old radios that might be surplus and they want to sell. Let me know.
tnx
hank wd5jfr

1214. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:34:23 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EEA9F.9070503@bellsouth.net>
Source record: 37667

Here's and interresting grid dip circuit.
Remember the Heath tunnel dipper? Well you probably can't
find tunnel diodes anymore, but here is another way......

http://www4.tpgi.com.au/users/ldbutler/NegResDipMeter.htm

1215. Re: ferrite rods wtb

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 01:35:42 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EEAEE.7090801@bellsouth.net>
Source record: 37668

Henry Kolesnik wrote:
> Anyone have any long, 6 inch or longer ferrite rods they've salvaged from
> old radios that might be surplus and they want to sell. Let me know.
> tnx
> hank wd5jfr
>
>

Building a linear filament choke?

1216. Re: Tektronix 465B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 02:38:21 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EF99D.3080005@bellsouth.net>
Source record: 37669

I have a tek 454 that I won at a company auction where I used to work.
They were
getting rid of some older equipment and decided to give the employees a
chance to
buy them. No minimum bids, but they did suggest what they were worth.
I got the
454 for $150, and when I went to pick it up they 'threw in' a scope
cart, a viewing hood,
and a half dozen probes.

They also were auctioning off a 465, but I was told that the CRT in the
465 didn't last, the ones
in the 454 did.

1217. Re: LM7812 Diode Adjustment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 02:58:50 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4EFE6A.5080605@bellsouth.net>
Source record: 37670

young kim wrote:
> Larry W <larry@scuttlebutt.org> wrote in message
news:<Xns931B8F0A05170scuttlebutt@65.24.2.12>...
>
>>Many years ago there was an article in CQ magazine on building a simple
>>power supply using the LM7812. The output voltage of the LM7812 could be
>>tweaked to whatever voltage in .6 volt increments by using diodes in the
>>ground circuit of the LM7812. By using three diodes the output voltage
>>could be adjusted to exactly 13.8 volts. Since moving I have lost the
>>article in the shuffle and would really appreciate if someone could give
>>some help on finding this schematic.
>>
>>Thank,
>>
>>Larry
>>
>>lweaver at yahoo.com
>
> Hello,
> You can go to website for Fairchild semi or On semi and find the spec.
> But TO220 package, you will see the left pin is input and middle pin
> is ground and right pin is for output. Insert any silicon diode like
> 1N4001 series between Pin 2 and ground and keep the cathode side (
> where the band is marked)
> to the ground side, this will raise 0.6V or so.
> But if you use more than 1A, you had better try LDO. (Low voltage
> drop regulators) LM7812 need at least 4V head room voltage so if you
> draw 1A, you are talking about 4W dissipation in that IC. But if your
> can maintain input voltage to 14.8V or so then voltage drop using LDO
> will be less than 1V so the total dissipation on that rgulator is 1W,
> much cooler and need small heat sink.
> There are 3A versions available in that same package. Go to On semi
> website or National semi and look for LDO. You can find adjustable
> type as well.
> Good luck. YOU can get some samples from them at free of charge.
> Young Kim
> K6hm

I have even connected a pot from the output lead to ground and connected
the common lead of the regulator to the wiper of the pot and used 7805's as
adjustable regulators. The trick worked just fine, only problem is you
can't
go lower than 5 volts (lm317 only goes as low as 1.2 volts). You don't want
to exceed the input voltage rating on the 7805, but I think it will go

as high as
12 volts output without exceeding the input rating.

1218. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 03:08:35 UTC
From: kenneth scharf <wa2mze@bellsouth.net>
Message-ID: <3E4F00B3.6000402@bellsouth.net>
Source record: 37671

Bill Beal wrote:
> I am looking at building a simple all-band receiver. After going
> through a lot of the litature, I belive a first IF around 70 MHz would
> be a good candidate with a second conversion to a more resonable IF
> frequency (455 KHz to a few MHz). I have looked but not found a source
> for crystal filters at around 70 MHz. Preferably 8 poles with about a
> 15 KHz bandwidth is my desired goal. Does anybody sell these in small
> quantities (lots of 1) at a reasonable price (not the price of a top
> notch IF filter as for some of the commercial rigs)?
>
> Bill, WD5HHH
>

I was thinking of a design for an all band receiver too. The design I'm thinking of would use a first IF in the 6 meter band (variable if) so it would
be an up converter working into a 6 meter receiver. Second if would be 9mhz (I found a half dozen if filters with an 8 pole shape and a bw of 3.2 khz at Dayton
a few years ago. Would use at least two of them in the if). Third IF would be
either 455khz (also have a few Collins mechanical filters in the junk box, one
with a 2.0 khz bw, one at 2.7khz) or 85khz (BC453 cans.) If I use the 85khz
if's the stage will use a 6AR11 tube!

1219. RF Trans Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 17:14:34 UTC
From: Woody <KZ4AK@att.net>
Message-ID: <3E4FC718.5FBDA459@att.net>
Source record: 37672

Hello All,

Got 3 RF transistors. Looking for specifications. Google, no help!
Don't even know if they ever made it to "production".

Marking:
Motorola "BatWing"
SRF3131
SAMPLE
102

Package:
6 lead - 3/end B-C
Square ceramic cap, ~0.4" / side.
Rectangular flange, ~ 1" x 0.4"

My ohm meter suggests, at least, they are bipolar...

Thanks es 73,
Woody
--
My website: http://woody.white.home.att.net/
KZ4AK - Homebrew Ham/Electronics Projects &
Eclectic Scanning Electron Microscope Images

1220. Re: Question on dual-gate MOSFETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 17:21:34 UTC
From: Woody <KZ4AK@att.net>
Message-ID: <3E4FC8BB.2080C246@att.net>
Source record: 37673

If you use G1 as the input, G2 voltage will affect the gain. Ground
for minimum. To raise gain, bypass well to ground and apply bias.
Depends on device, but if the Vds is 4 to 8 volts, 3 to 4 volts will
go to near max gain.
Woody

Paul Burridge wrote:
>
> If I plan to use only one gate of a DGM., which gate should I use? Or
> can I use either?
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

--
My website: http://woody.white.home.att.net/
KZ4AK - Homebrew Ham/Electronics Projects &
Eclectic Scanning Electron Microscope Images

1221. Re: RF Trans Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 17:54:01 UTC
From: larryc@northwest.com
Message-ID: <3E4FD039.CFDAF418@northwest.com>
Source record: 37674

well, if it is marked "sample" it could very well be a mechanical "show
and tell" dummy. used for marketing purposes.

that's what we call them in the IC chip industry.

was this pulled from an operational rig?

=====
Woody wrote:

> Hello All,
>
> Got 3 RF transistors. Looking for specifications. Google, no help!
> Don't even know if they ever made it to "production".
>
> Marking:
> Motorola "BatWing"
> SRF3131
> SAMPLE
> 102
>
> Package:
> 6 lead - 3/end B-C
> Square ceramic cap, ~0.4" / side.
> Rectangular flange, ~ 1" x 0.4"
>
> My ohm meter suggests, at least, they are bipolar...
>
> Thanks es 73,
> Woody
> --
> My website: http://woody.white.home.att.net/
> KZ4AK - Homebrew Ham/Electronics Projects &
> Eclectic Scanning Electron Microscope Images

1222. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 18:13:42 UTC
From: John Isenberg <jisenber@bellsouth.net>
Message-ID: <eqQ3a.35865$742.30633@fe07.atl2.webusenet.com>
Source record: 37675
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Down east microwave has one either in Kit form or built and tested.

http://www.downeastmicrowave.com

I do not have this one, but I have several of their transverters that I
built from kits and they are great.

Jack
WA2IID

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b2gjki$1cdu4i$1@ID-150848.news.dfncis.de...
> Hi. Can anyone recommend a currently produced 2 meter convertor. Heck,
I don't
> even know if these things are commercially made anymore. Last one I had
was from
> Microwave Modules, but I cannot seem to locate a MM convertor on the web.
Maybe I
> have to homebrew. TIA. Rich.
>
> (Crossposted)
>

1223. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 21:05:51 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e4ffd05$0$118$edfadb0f@dtext02.news.tele.dk>
Source record: 37676
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Hej

> > ROFLMAO!!!!
> >
> > have you seen the address for ten-tec at the top of their web page????
>
>
> I should imagine mountaineous terrain with twin peaks ;-)

It might be Silicone Valley :)

1224. Re: need spec sheet for CA3035

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 22:11:35 UTC
From: mzenier@eskimo.com
Message-ID: <b2r5h1$aa1$1@eskinews.eskimo.com>
Source record: 37687

In article <3E4EBFFE.9090705@bellsouth.net>,
kenneth scharf <wa2mze@bellsouth.net> wrote:
>Does anyone have a copy of a spec sheet for the RCA
>CA3035 op amp?

It's not really an op-amp, just a collection of 3 gain blocks.

>These were used in the TenTec PM1 and Heath HW7, maybe the HW8 and PM2
>and 3 as well.

ftp://ftp.eskimo.com/u/m/mzenier/RCA3035.pdf

(Yea, just one page. From the 1976 RCA databook).

Mark Zenier mzenier@eskimo.com Washington State resident

1225. Re: RTTY Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 22:31:44 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <2SadnY3AEK6Tvc2jXTWcow@ctc.net>
Source record: 37678
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> I have a Ten Tec Scout that I would like to use for RTTY.
>
> Do any of you know of a web site reference I can visit that will give me
> some ideas on a homebrew interface between it and my Thinkpad 760E?

Look here for a sound card interface kits and they do have the schematics
for them.
http://www.packetradio.com/psk31.html

1226. RTTY Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 22:34:15 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <mdU3a.31$U4.10652@news.iquest.net>
Source record: 37677
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I have a Ten Tec Scout that I would like to use for RTTY.

Do any of you know of a web site reference I can visit that will give me
some ideas on a homebrew interface between it and my Thinkpad 760E?

Thanks

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

1227. Re: RTTY Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-16 23:43:03 UTC
From: john graesser <graesser@tca.net>
Message-ID: <v508eoda3r100c@corp.supernews.com>
Source record: 37679
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

"Scrounger" <brian@iquest.net> wrote in message
news:mdU3a.31$U4.10652@news.iquest.net...
> I have a Ten Tec Scout that I would like to use for RTTY.
>
> Do any of you know of a web site reference I can visit that will give me
> some ideas on a homebrew interface between it and my Thinkpad 760E?

When I tried Mntty thru the soundcard I was able to use the same interface that I built for digipan. Check out the digipan docs, that shows you how to interface a radio to a sound card. Digipan, Mntty, Cwget and Cwput all use the same interface, the only one that is different is the slow cw program whose name escapes me right now, it used a different pin to key the transmitter, but in that case I just made a null modem style pin swapper that I would add when using it.

As long as you have a mic in, spk out, and a serial port on the computer you have all you need there. On the computer end you just need to locate mic in, spk out and ptt.

The interface I built used 2 audio isolation transformers, 2 transisters, a couple of resisters, and maybe a diode or two. Took all of 10 minutes to wire it up on a perfboard.
thanks, John.
KC5DWD

1228. Re: RF Trans Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 00:45:11 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E50309E.BB8D8CDC@silverstar.com>
Source record: 37680

Try
http://e-www.motorola.com/webapp/sps/site/taxonomy.jsp?nodeId=0175206587

1229. Re: RF Trans Identification? -TNX

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 01:26:10 UTC
From: Woody <KZ4AK@att.net>
Message-ID: <3E503A4C.7204A263@att.net>
Source record: 37681

Thanks for the replies & emails...

Unsure of original source... They are multi-hand-me-down goodies.
The ohmmeter sez there are "diodes" in the right places, so some die
is there. Searches come up empty. As commented (unless I got damn
lucky ;), they will likely remain a mystery. Too bad, the pakage
suggests a nice power level - somewhere...

Tnx agn,
Woody

--
My website: http://woody.white.home.att.net/
KZ4AK - Homebrew Ham/Electronics Projects &
Eclectic Scanning Electron Microscope Images

1230. Re: GAG CELLPHONE ANTENNA BOOSTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 02:20:54 UTC
From: techie@tantivy.stanford.edu
Message-ID: <b2pgu6$4qo$1@news.Stanford.EDU>
Source record: 37682
Cross-posted to: comp.dcom.telecom.tech,comp.dcom.cabling,sci.electronics.misc,rec.radio.amateur.homebrew

In article <b196su01duh@enews4.newsguy.com>,
J. Clarke <nospam1@nospam.invalid> wrote:
>
>Hmm. I sense a new market or three here. That cord doesn't do you any
>good without audiophile wiring going all the way back to the power
>plant. And it needs an audiophile-quality generator powered by an
>audiophile-quality dam or steam engine or nuclear reactor. Since it is
>unlikely that the power companies will install such equipment just to
>cater to the relatively small market of superior individuals who can
>understand the need for such things, then it becomes necessary to take
>the power issue directly in hand with an audiophile-quality diesel
>generator, which only meets spec if powered by audiophile-quality diesel
>fuel (can't use a natural-gas generator--can't trust the gas company to
>deliver audiophile-quality gas).
>
>Then there is the audiophile-quality breaker panel that needs
>audiophile-quality breakers, and the audiophile-quality receptacle . . .
>
>How much do you think one could get for wiring up a house with
>audiophile-quality power? $50K? 100? And how much should one charge
>for audiophile-quality diesel fuel, $50/gallon?
>

Ah, but then you would only be able to listen to media that was recorded in an
audiophile-quality studio, using all of the above dreck..
Since i know of no studios that meet the above specifications, I guess they
will have to listen to the blissful silence.

And don't even think about listening to live recordings, since none of the
pro audio companies use the above listed dreck on the road..

--
-- Welcome My Son, Welcome To The Machine --
Bob Vaughan | techie@{w6yx|tantivy}.stanford.edu | kc6sxc@w6yx.ampr.org
| P.O. Box 19792, Stanford, Ca 94309
-- I am Me, I am only Me, And no one else is Me, What could be simpler? --

1231. FS; interesting radio tubes..!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 02:40:12 UTC
From: "." <erpi@revelstoke.net>
Message-ID: <gYX3a.28343$495.1342838@news1.telusplanet.net>
Source record: 37683
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello everyones,I do have for sale these interesting radio tubes...some new,some used as mentionned.....and feel free to contact me.....Rick
qty # price(US)
1 7360(used,good) $25.00
1 931A (used,ecel) $25.00
1 7868(used,excel) $25.00
1 8156(west,good used) $10.00
1 2050(GE,used,excel) $10.00
1 8233/E55L NOS $30.00
2 1P40 NOS $13.00 each
1 6267/EF86(GE,NOS) $25.00
2 7687 Syl,NOS $20.00
1 7788/E810F NOS $25.00
1 7199 Syl. NOS $20.00
1 918 NOS RCA $15.00
1 ux112A(used) $30.00
1 50A1(used,excel) $20.00
1 6CA7/EL34 SYL NOS $45.00
1 6A3 (st) RCA NOS $30.00
1 6U5/6G5 used,good $20.00
1 6B5 NOS $20.00
1 6HB5 Syl NOS $10.00
1 6JR6 (used,good) $15.00
1 6CD7/EM34 NOS $50.00
Thanks for your time,and feel free to contact me for any question.Shipping will be paid by the buyer....Thank you

1232. Re: ferrite rods wtb

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 04:14:16 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v50ocqr7f761b8@corp.supernews.com>
Source record: 37684

Nope, VLF loop antennas.
"kenneth scharf" <wa2mze@bellsouth.net> wrote in message
news:3E4EEAEE.7090801@bellsouth.net...
> Henry Kolesnik wrote:
> > Anyone have any long, 6 inch or longer ferrite rods they've salvaged
from
> > old radios that might be surplus and they want to sell. Let me know.
> > tnx
> > hank wd5jfr
> >
> >
>
> Building a linear filament choke?
>
>
>

1233. Re: FS; interesting radio tubes..!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 13:42:38 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <kG54a.807$uz6.90157@newsfep1-win.server.ntli.net>
Source record: 37685
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
"." <erpi@revelstoke.net> wrote in message
news:gYX3a.28343$495.1342838@news1.telusplanet.net...
> Hello everyones,I do have for sale these interesting radio tubes...some
> new,some used as mentionned.......and feel free to contact me.......Rick
> qty # price(US)
> 1 7360(used,good) $25.00
> 1 931A (used,ecel) $25.00
> 1 7868(used,excel) $25.00
> 1 8156(west,good used) $10.00
> 1 2050(GE,used,excel) $10.00
> 1 8233/E55L NOS $30.00
> 2 1P40 NOS $13.00 each
> 1 6267/EF86(GE,NOS) $25.00
> 2 7687 Syl,NOS $20.00
> 1 7788/E810F NOS $25.00
> 1 7199 Syl. NOS $20.00
> 1 918 NOS RCA $15.00
> 1 ux112A(used) $30.00
> 1 50A1(used,excel) $20.00
> 1 6CA7/EL34 SYL NOS $45.00
> 1 6A3 (st) RCA NOS $30.00
> 1 6U5/6G5 used,good $20.00
> 1 6B5 NOS $20.00
> 1 6HB5 Syl NOS $10.00
> 1 6JR6 (used,good) $15.00
> 1 6CD7/EM34 NOS $50.00
> Thanks for your time,and feel free to contact me for any question.Shipping
> will be paid by the buyer....Thank you
================
Seeing the above prices , I'll have to rename my valve (tube) 'Junk Box' to
'Thermionic Goldmine'

Frank gm0csz.kn6wh@ntlworld.com
```

1234. WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 16:52:23 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <CI6TjrMHNRU+EwRY@fslife.co.uk>
Source record: 37686

Looking for one new or used but working BLY92A.

I cannot find an exact substitute, either the package or thread/stud is
different or the electrical parameters are way off base.

Any help appreciated.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1235. Re: Re: crap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 18:14:40 UTC
From: Pat Martini <mailserver2@cygap.com>
Message-ID: <kE94a.567$hj.587212@nnrp1.ptd.net>
Source record: 37688

Very good!

"Master of the universe and supreme ruler of all living beings (when my wife
will let me!)" <john.smith@micro$oft.com> wrote in message
news:b2i461$53l$1@newstoo.ericsson.se...
> > > crap
> > Noun or verb?
>
> I think he meant "carp" (a fish), but he is probably dsylxeic!
>
>
>

1236. Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 19:19:17 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <osc25vkkftse24u5nmukk4tni4n2tpdut2@4ax.com>
Source record: 37689
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi,

Can any kind soul point me in the direction of a circuit for a
reasonably decent RFSM?
Thanks,

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1237. WaveTek 3000 manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 19:30:03 UTC
From: pdrunen@aol.com
Message-ID: <20030217143003.21580.00001429@mb-mu.aol.com>
Source record: 37690

Anyone know were I can get a service manual for WaveTek 3000?

How about the different between the 3000 and 3001 ?

Tnx de KJ4UO

1238. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 20:16:04 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <8qb4a.36819$Rx3.1364486@news1.west.cox.net>
Source record: 37691
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Try URL:
http://www.mitedu.freeserve.co.uk/Circuits/RF/sfsm.htm

More Homebrew projects at URL:
http://ac6v.com/homebrew.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:osc25vkkftse24u5nmukk4tni4n2tpdut2@4ax.com...
>
>
> Hi,
>
> Can any kind soul point me in the direction of a circuit for a
> reasonably decent RFSM?
> Thanks,
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

1239. sd1407 transistor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 21:25:14 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045517182.237667@auth2.dns.griffin.net.uk>
Source record: 37692

hi there

building a vhf amp as a driver for a bigger amp to be installed in a band 11 tx. (for use in Africa.)
now I need 100-150watts out and I have some sd1407's....
I know these transistors will work here frequency wise but am unsure of power out and gain at 108mhz.
So far I have managed to get 80w with 15 drive at 28v in class C, about 7db gain..
Any thoughts????
Has anyone used these devices??
I assume they are ment to be used in class C at VHF?

I have been told they are good for 150w are they??and if so does anyone have a tried and tested design..?
The spec sheet of course doesnt mention vhf use..

thanks Simon

1240. Re: WaveTek 3000 manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 21:49:14 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E52AAFA.AA3CE9AF@rica.net>
Source record: 37693

PDRUNEN wrote:
>
> Anyone know were I can get a service manual for WaveTek 3000?
>
> How about the different between the 3000 and 3001 ?
>
> Tnx de KJ4UO

http://manualsplus.com has a troubleshooting manual for $30 and an
operations and service manual for $60.

--
John Popelish

1241. Re: RF Trans Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 22:49:42 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <aGd4a.57573$zF6.3938038@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37694

The "S" in this case stands for special. When Motorola run a batch of RF transistors... they are sorted by various characteristics as to performance. The "S" on this type of device signifies espescially high gain.

The other news I have is that I have been unable to find any information on that device number...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Special Offer thru April
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

<larryc@northwest.com> wrote in message
news:3E4FD039.CFDAF418@northwest.com...
> well, if it is marked "sample" it could very well be a mechanical "show
> and tell" dummy. used for marketing purposes.
>
> that's what we call them in the IC chip industry.
>
> was this pulled from an operational rig?
>
> =====
> Woody wrote:
>
> > Hello All,
> >
> > Got 3 RF transistors. Looking for specifications. Google, no help!
> > Don't even know if they ever made it to "production".
> >
> > Marking:
> > Motorola "BatWing"
> > SRF3131
> > SAMPLE
> > 102
> >
> > Package:
> > 6 lead - 3/end B-C
> > Square ceramic cap, ~0.4" / side.
> > Rectangular flange, ~ 1" x 0.4"
> >
> > My ohm meter suggests, at least, they are bipolar...
> >

> > Thanks es 73,
> > Woody
> > --
> > My website: http://woody.white.home.att.net/
> > KZ4AK - Homebrew Ham/Electronics Projects &
> > Eclectic Scanning Electron Microscope Images
>

1242. Re: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 23:06:21 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <NVd4a.57595$zF6.3938592@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37695

Yes, all those Philips parts are hard to find as a rule...lol
What are the specs on that device? You may end up choosing a close
substitute, and retune your matching a bit.

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:CI6TjrMHNRU+EwRY@fslife.co.uk...
> Looking for one new or used but working BLY92A.
>
> I cannot find an exact substitute, either the package or thread/stud is
> different or the electrical parameters are way off base.
>
> Any help appreciated.
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

1243. Re: WaveTek 3000 manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-17 23:12:33 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <B%d4a.57604$zF6.3939876@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37696

Wavetek has been purchased by Fluke.
Try http://www.fluke.com/calibrators/cal.asp
You might want to give them a call...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20030217143003.21580.00001429@mb-mu.aol.com...
> Anyone know were I can get a service manual for WaveTek 3000?
>
> How about the different between the 3000 and 3001 ?
>
> Tnx de KJ4UO

1244. TCA440

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 00:14:49 UTC
From: Petar Ristic <rileso@eunet.yu>
Message-ID: <b2rslh$3n7$1@news.eunet.yu>
Source record: 37697

Use TCA440 as secondary mixer from 10.7MHz to 455Khz and IF amp, voltage at pin 11 is 1.1V, pin 12 0.1V and pin 13 0.1V. They would be 1.5V...
I know that, without schematic, is hard to answer, but I interest which pins have influence on bias point of this pins???

Thanks!

1245. Re: WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 00:18:28 UTC
From: la8ak.xnd@online.no
Message-ID: <3e515d52.198536305@news.online.no>
Source record: 37698

On Mon, 17 Feb 2003 16:52:23 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Looking for one new or used but working BLY92A.
>
>I cannot find an exact substitute, either the package or thread/stud is
>different or the electrical parameters are way off base.
>
>Any help appreciated.
>--
>Philip de Cadenet G4ZOW
>Transmitters 'R' Us
>http://www.transmittersrus.com

You must be joking, OM.
2m 15W 28V standard SOT48 case shouldn't be difficult to find.
Motorola replacement is 2N5641, while replacement for BLY92C is
2N5642, so I would check up the data for for the latter device

Could pass you few pages from the Philips handbook on an occasion

73
Jan Martin
http://www.laud.no/la6nca/LA8AK/la8ak/index.htm
--
remove ,xnd to reply

1246. Motorola Apps Note AN980

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 00:26:57 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E517E87.7C76B069@alma.demon.co.uk>
Source record: 37699

Has anyone got a copy of this apps note which relates to the use of the MC3362 narrow band FM receiver IC? A Google search just produced lots of references.

regards...

--Gary

1247. Motorola KDT-8400 Data Terminal

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 01:03:54 UTC
From: Terry Nixon <TLNixon@mchsi.com>
Message-ID: <_Df4a.154434$HN5.649892@rwcrnsc51.ops.asp.att.net>
Source record: 37700

Has anyone figured out how to use these things for something like a Packet Terminal? Anyone have any info on them?

I have had this one apart and can see where the data terminal plugs into the radio transciever.

1248. Re: need spec sheet for CA3035

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 01:59:45 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E519391.30707@bellsouth.net>
Source record: 37701

Mark Zenier wrote:
> In article <3E4EBFFE.9090705@bellsouth.net>,
> kenneth scharf <wa2mze@bellsouth.net> wrote:
>
>>Does anyone have a copy of a spec sheet for the RCA
>>CA3035 op amp?
>
>
> It's not really an op-amp, just a collection of 3 gain blocks.
>
>
>>These were used in the TenTec PM1 and Heath HW7, maybe the HW8 and PM2
>>and 3 as well.
>
>
> ftp://ftp.eskimo.com/u/m/mzenier/RCA3035.pdf
>
> (Yea, just one page. From the 1976 RCA databook).
>
> Mark Zenier mzenier@eskimo.com Washington State resident
>
>
>

Thanks! At least it has the pin out.

1249. WTB: affordable HF trans.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 02:21:01 UTC
From: "." <erpi@revelstoke.net>
Message-ID: <hMg4a.33182$9K5.1522930@news0.telusplanet.net>
Source record: 37702
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Hello guys,I am writing this add to find out if one of you would have a HF transceiver I could buy for an affordable price...my work situation is not too good at the moment....If you have a trans. and would agree to sell it for an affordable price...please let me know.......Rick

1250. Re: Motorola Apps Note AN980

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 03:16:04 UTC
From: crabtreejr@aol.com
Message-ID: <20030217221604.27943.00000667@mb-cm.aol.com>
Source record: 37703

Gary Morton gary@alma.demon.co.uk on 2/17/03 wrote:

>Has anyone got a copy of this apps note which relates to the use of the
>MC3362 narrow band FM receiver IC? A Google search just produced >lots of
references.
>regards...
>--Gary

Go to www.motorola.com
Click on 'Solutions for Semiconductors'
Click on 'Documentation'
At the bottom of the page click on
'Literature Distribution Center Archived Documents'
Then do a search for AN980

73 John KC0GGH

1251. Re: sd1407 transistor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 03:48:03 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045540083.70497@auth2.dns.griffin.net.uk>
Source record: 37704

got it running at 100w for 15 in now, however max rating still required..
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1045517182.237667@auth2.dns.griffin.net.uk...
> hi there
>
> building a vhf amp as a driver for a bigger amp to be installed in a band
11
> tx. (for use in Africa.)
> now I need 100-150watts out and I have some sd1407's....
> I know these transistors will work here frequency wise but am unsure of
> power out and gain at 108mhz.
> So far I have managed to get 80w with 15 drive at 28v in class C, about
7db
> gain..
> Any thoughts????
> Has anyone used these devices??
> I assume they are ment to be used in class C at VHF?
>
> I have been told they are good for 150w are they??and if so does anyone
have
> a tried and tested design..?
> The spec sheet of course doesnt mention vhf use..
>
> thanks Simon
>
>

1252. Re: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 03:48:39 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045540118.967156@auth2.dns.griffin.net.uk>
Source record: 37705

may have something here.. whats it going in..
"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:CI6TjrMHNRU+EwRY@fslife.co.uk...
> Looking for one new or used but working BLY92A.
>
> I cannot find an exact substitute, either the package or thread/stud is
> different or the electrical parameters are way off base.
>
> Any help appreciated.
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

1253. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 07:02:17 UTC
From: dmb06851@yahoo.com
Message-ID: <1757808.0302172302.3c386333@posting.google.com>
Source record: 37706
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge <redscar@waitrose.notthisbit.com> wrote
>
> Can any kind soul point me in the direction of a circuit for a
> reasonably decent RFSM?

There was one in "Electronics World" March 1994 in the Circuit Ideas
section.

The detector is similar to the one in the link in the other posting
but it uses an op-amp to increase snsitivity. Works from 100kHz to
500MHz. If you're interested and can't find the issue let me know
(email) and I'll post it somewhere.
Regards.

1254. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 08:42:41 UTC
From: john_c@tpg.com.au
Message-ID: <3e51ee11.34235731@News.CIS.DFN.DE>
Source record: 37707
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Mon, 17 Feb 2003 19:19:17 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>
>
>Hi,
>
>Can any kind soul point me in the direction of a circuit for a
>reasonably decent RFSM?
>Thanks,
>
>p.
>--
Hello Paul,
just the same as a crystal set with a meter.
No battery, metal box, telescopic aerial, germanium
diode, nice big meter for viewing at a distance.
I sit mine on a household metal serving tray that has
been around for decades and not likely to get
chucked out, helps getting consistant readings.

Is this meter for your radio controlled fighting
robot project?
How is it going?

Regards,
John Crighton
New South Wales

1255. Re: Motorola Apps Note AN980

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 09:20:31 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E51FB96.32930CB4@alma.demon.co.uk>
Source record: 37708

John Crabtree wrote:
>
> Gary Morton gary@alma.demon.co.uk on 2/17/03 wrote:
>
> >Has anyone got a copy of this apps note which relates to the use of the
> >MC3362 narrow band FM receiver IC? A Google search just produced >lots of
> references.
> >regards...
> >--Gary
>
> Go to www.motorola.com
> Click on 'Solutions for Semiconductors'
> Click on 'Documentation'
> At the bottom of the page click on
> 'Literature Distribution Center Archived Documents'
> Then do a search for AN980
>
> 73 John KC0GGH

John,

found it. Brilliant - many thanks.

I did try the On Semiconductor (the new name for Motorola
Semiconductors?) web site. I found a reference but not the document. I
didn't think to try the Motorola web site as I thought they were now
different. Confusing.

regards...

--Gary

1256. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 13:39:44 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <snd45v40keuen707mn4vbb6u1tguiku3t6@4ax.com>
Source record: 37709

Off topic i know but ...

I've always wondered why it's always been said that ssb (or dsb) has no carrier.

Cuz it does, it just aint their when no modulation is present, take the carrier away completely and you no longer have a transmitter ... hehe

anyway, carry on guys, sorry to poke my nose in :)

Clive

1257. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 13:47:25 UTC
From: Lou <tech@dp.net>
Message-ID: <b2tkprhqv1@news.dp.net>
Source record: 37711
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I have a copy of one that I've built. It works for checking FSM as well as using it to test for very small RF voltages in a transmitter when tuning or repairing. I've built two of them employing other options of my own and they have saved me hours of time already. Cost about $10 and an hour to build. Depending on parts on hand and how you choose to build it. This is a non tuned meter... can be used over a pretty wide range.
--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
Checks must clear before shipping
"dB" <dmb06851@yahoo.com> wrote in message
news:1757808.0302172302.3c386333@posting.google.com...
> Paul Burridge <redscar@waitrose.notthisbit.com> wrote
> >
> > Can any kind soul point me in the direction of a circuit for a
> > reasonably decent RFSM?
>
>
>
> There was one in "Electronics World" March 1994 in the Circuit Ideas
> section.
>
> The detector is similar to the one in the link in the other posting
> but it uses an op-amp to increase snsitivity. Works from 100kHz to
> 500MHz. If you're interested and can't find the issue let me know
> (email) and I'll post it somewhere.
> Regards.

1258. ebay - triplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 14:00:17 UTC
From: "Mike G." <tazanator1@hotmail.com>
Message-ID: <v54f3jk71km782@corp.supernews.com>
Source record: 37710

Comet Triplexer CFX-514
was only $13.50 this morning with 12 hours left ....

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3008042277
&rd=1>

1259. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 15:32:40 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93264CBFDADD6pookster@216.168.3.50>
Source record: 37713

c.a.m@nospamherethanks.blueyonder.co.uk wrote in
news:snd45v40keuen707mn4vbb6u1tguiku3t6@4ax.com:

> Off topic i know but ...
>
> I've always wondered why it's always been said that ssb (or dsb) has
> no carrier.
>
> Cuz it does, it just aint their when no modulation is present, take
> the carrier away completely and you no longer have a transmitter ...
> hehe
>
> anyway, carry on guys, sorry to poke my nose in :)
>
> Clive
>
>

Couldn't have been more wrong if you tried, Clive.

--
Bill, W7TI

1260. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 15:45:16 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <e7l45vocmtvub92b3ue7v7pg083eb9qq9m@4ax.com>
Source record: 37714

>Couldn't have been more wrong if you tried, Clive.

?

1261. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 15:49:13 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <val45v8pmfli7r83t48oisea0h32dumk5b@4ax.com>
Source record: 37715

sniff a ssb with a scope, you'll see a carrier modulated by the envelope, you have got to have a carrier for it to propergate thru the ether, just not modulated in the same way as AM or FM.

1262. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 16:35:08 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932657566B860pookster@216.168.3.50>
Source record: 37716

c.a.m@nospamherethanks.blueyonder.co.uk wrote in
news:val45v8pmfli7r83t48oisea0h32dumk5b@4ax.com:

> sniff a ssb with a scope, you'll see a carrier modulated by the
> envelope, you have got to have a carrier for it to propergate thru the
> ether, just not modulated in the same way as AM or FM.
>

Sniffed it many times, there is no carrier. Just RF in the form of a
sideband. You're misunderstanding the definition of "carrier".

A carrier is a more-or-less constant RF signal which has its properties
changed by some form of modulation, typically AM or FM. The total signal
transmitted consists of the carrier and one or more sidebands. With SSB,
the carrier and one of the sidebands are removed and only the remaining
sideband is transmitted.

--
Bill, W7TI

1263. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 16:36:05 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b2tndl$o3n$1@freenet9.carleton.ca>
Source record: 37717

(c.a.m@nospamherethanks.blueyonder.co.uk) writes:
> Off topic i know but ...
>
> I've always wondered why it's always been said that ssb (or dsb) has no carrier.
>
> Cuz it does, it just aint their when no modulation is present, take the carrier
> away completely and you no longer have a transmitter ... hehe
>
> anyway, carry on guys, sorry to poke my nose in :)
>
> Clive
>
Here we go.

AM is actually a translation of audio up to radio frequencies, in
the same way that mixers in superheterodyne receivers translate frequencies.
The carrier is needed, to beat against the audio information and create
the radio signal.

You've got a 1KHz tone, and a 10MHz carrier. Mix those two together,
and you get a signal of 10.001MHz. You also get the other sideband, or
image, from the difference, 9.999MHz. Each are radio frequencies, just
as real as the 10MHz carrier.

That 10MHz carrier is there as a result of an imperfect mixer. It
servies no purpose at the output of the mixer, just at the input.

Use a balanced mixer, so there is no feedthrough of the carrier,
and you get the two sidebands, 9.999MHz and 10.001MHz, which because
of the simple modulation signal, are two distinct radio frequencies.
They transmit fine. And since each are mirror images, you can even
get rid of one, so you have an SSB signal.

At the receiver end, you are translating the signal down to audio.
With an SSB or DSB signal with suppressed carrier, you have to insert
that beat signal at the receiver. With SSB, that's the role of the BFO;
with DSB it's a bit more complicated but the same principle.
10.001MHz-10MHz, and the result is your 1KHz signal again. Note
that without that reinserted carrier, you cannot recover the original
signal. You can see the amplitude variation of that original signal,
but can't actually demodulate it.

With AM, since the carrier is still there, you don't need to
reinsert the carrier at the receiver. The carrier signal sent
out of the antenna mixes with the sidebands in the receiver's detector,
and the sidebands are translated down to the original audio frequencies.

Michael VE2BVW

1264. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:11:50 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <d7t45vcct7gnunqo6hcdc4dpkoujusu96l@4ax.com>
Source record: 37718

aye I know the 'carrier' that's actually transmitted is not the original CW carrier that's fed into the mixer, but it's still an RF carrier when it comes out tuver end, just a mix of modulating waveform and original CW carrier. Though spread across one side or the other (or both) of the original CW.

The word 'carrier' to me means the actual sinusoidal AC waveform (at RF freqs) that has the modulating waveform piggy backed onto it and 'carriers' it thru space as it were. Whether it's a side band (mix of original CW and modulating waveform) or not I wasn't discounting, was just saying.

Clive

1265. Re: 2 meter (to 10 meter probably) convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:17:22 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E5278B2.3F0E5677@crosslink.net>
Source record: 37712
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

> "Richard" <nearlynews_email@ntlworld.com> wrote
> > Hi. Can anyone recommend a currently produced 2 meter convertor.

Thing is the CB craze has created so many inexpensive 10M rigs that converters are less than popular. You can usually buy a Radio Shack all-mode 25 watt rig for well under $100US on ebay.
73, K3DWW

1266. Re: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:19:52 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <UOZ2STPIInU+EwyQ@fslife.co.uk>
Source record: 37719

Hello Brian,

>Yes, all those Philips parts are hard to find as a rule...lol
>What are the specs on that device? You may end up choosing a close
>substitute, and retune your matching a bit.
I think you're most definitely right.

I have a TP9383 winging it's way to me from Holland as we speak. The
driver device seems to be the problem. The BLY92A

I've been unable to find an online datasheet.

My requirement is to replace the missing parts (driver and output) in
an old Rohde & Schwarz FM broadcast exciter that runs around 60w out.

Here's as much spec as has been passed to me:

BLY 92A
sot 48/2 15W, 8-32 UNC 8.5 mm diam nut 4.2mm clearance mtg hole

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1267. Re: WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:23:19 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <X+u2uqPXonU+EwQt@fslife.co.uk>
Source record: 37720

Hello Jan,

>You must be joking, OM.
>2m 15W 28V standard SOT48 case shouldn't be difficult to find.
>Motorola replacement is 2N5641, while replacement for BLY92C is
>2N5642, so I would check up the data for for the latter device
>
>Could pass you few pages from the Philips handbook on an occasion
If you have spec on the original BLY92A device then I would very much
appreciate a copy.

What about the same for the TP9383?

Many thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1268. Re: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:24:35 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <s5TI$BQjpnU+Ew2D@fslife.co.uk>
Source record: 37721

Hi Simon,

>may have something here.. whats it going in..

>> Looking for one new or used but working BLY92A.
As I've stated in a previous post it's to repair a dead R & S FM
exciter.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1269. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 18:47:43 UTC
From: averyfineman@aol.com
Message-ID: <20030218134743.10244.00000007@mb-me.aol.com>
Source record: 37722

In article <snd45v40keuen707mn4vbb6u1tguiku3t6@4ax.com>,
c.a.m@nospamherethanks.blueyonder.co.uk writes:

>Off topic i know but ...

You seem to be trolling for something. Wrong bait.

>I've always wondered why it's always been said that ssb (or dsb) has no
carrier.

The original continuous wave RF carrier is suppressed
anywhere from 30 to 60 db down depending on equipment.
That much suppression is essentially "no carrier." There
is seldom enough amplitude there for effective detection at
the receiver. The receiver must supply a local RF carrier
very close to the original, suppressed carrier to recover the
original modulation information.

>Cuz it does, it just aint their when no modulation is present, take the
carrier
>away completely and you no longer have a transmitter ... hehe

Incorrect even to popular simplistic newsstand publication
standards.

Sideband content is at RF. Sidebands of AM, FM, or PM
carry the content of modulation and their transmission follows
RF propagation rules.

With standard AM (as in broadcasting) the carrier is
necessary to mix (heterodyne) with the sideband content
to derive or demodulate the modulation content in simple
detectors such as a single diode. Such simple detectors
are a form of mixer, mixing the carrier RF with the sideband
RF, suppressing the sum components, passing only the
difference components. The difference components are
the same frequency and amplitude as the original audio
used for transmitter modulation.

More complex detectors (e.g., "product detectors") use a
local RF carrier source to substitute for the suppressed RF
carrier. The action of demodulation is the same, heterodyning
and passing only the difference mix products.

The original "SSB" used in communications was frequency-
division multiplexing of four voice bandwidth channels
(approximately 3 KHz each) over an approximate 12 KHz

total bandwidth. This is typified by the old "Type C" carrier used in old long-distance telephony in the USA; Brits have something similar. A "pilot carrier" may or may not have been sent and used only for locking/stabilizing the receiving end carrier substitution oscillators required for demodulation of higher audio channels.

The first RF SSB used modulation almost directly from the telephonic "carrier" equipment. That began about 1930 and both governments and commercial carriers were using that form of SSB for the next five decades plus. Four voice bandwidth channels but two of those voice bandwidth channels were usually devoted to AFSK teleprinter (now lumped under "data" group in USA regulations). Six to twelve TTY circuits and two voice circuits could be sent on the same radio path from a single RF transmitter. The end result for TTY was four separate levels of frequency translation: DC loop current converted to audio tones, those audio tones frequency-shifted for several tone pairs (of separate circuits) in one voice bandwidth, several voice bandwidth channels frequency-shifted again to multiplex them within a single wider-bandwidth audio range, then that wideband audio frequency-shifted to RF for the actual SSB transmission. Everything winds up as RF with a relatively-narrow bandwidth on a radio path...then is demodulated to the original at the receiving end.

Some amateurs confuse the original SSB with the single-channel SSB that started becoming widespread in the late 1940s, first with military communications, then spreading to amateur radio, maritime radio (particularly boats and small ships), aviation (for long-distance comm), military radio (particularly for portable HF use on land, needing less local primary power demand). For single-channel SSB the prime requirement at each end is tuning frequency stability since very few such systems have "pilot carriers" for synchronizing/locking the RF carrier substitution in the receiver. Quartz crystals for frequency control were essential to make single-channel SSB viable for many different radio service applications. That came about after WW2 which spurred the large growth of quartz crystal unit production.

The very first "SSB" was in land wireline long-distance telephony. The first RF SSB was an extension of that long-distance telephony. Single-channel SSB became popular after WW2, having obvious advantages over conventional AM but absolutely needing frequency stability of the carrier or reference frequency at both transmitter and receiver.

>anyway, carry on guys, sorry to poke my nose in :)

You got a lecture. If your nose bothers you again, please
consult a physician. :-)

Len Anderson
retired (from regular hours) electronic engineer person

1270. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 19:09:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5517te5cep9e3@corp.supernews.com>
Source record: 37723

c.a.m@nospamherethanks.blueyonder.co.uk wrote:
> . . .
> The word 'carrier' to me means the actual sinusoidal AC waveform (at RF freqs)
> that has the modulating waveform piggy backed onto it and 'carriers' it thru
> space as it were. Whether it's a side band (mix of original CW and modulating
> waveform) or not I wasn't discounting, was just saying.
>
> Clive

The problem is, if you have any interest in communicating with other people, you need to use the term "carrier" in the same way everyone else does and has for the past hundred years or so. If you don't know what this meaning is, it would be beneficial to do a little research and find out before you use it. Of course, you're free to use any word to mean anything you like. But making up your own definitions sure interferes with communication -- if that's your objective.

Did you know pigs fly?

The word 'pig' to me means a feathered creature that lays eggs and chirps. . .

Roy Lewallen, W7EL

1271. Re: WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 19:59:14 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <id255vcrd0atfh5inf2bf0emhshaaoc95l@4ax.com>
Source record: 37724

On Tue, 18 Feb 2003 18:23:19 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> opined thusly:

>Hello Jan,
>
>>You must be joking, OM.
>>2m 15W 28V standard SOT48 case shouldn't be difficult to find.
>>Motorola replacement is 2N5641, while replacement for BLY92C is
>>2N5642, so I would check up the data for for the latter device
>>
>>Could pass you few pages from the Philips handbook on an occasion
>If you have spec on the original BLY92A device then I would very much
>appreciate a copy.
>
>What about the same for the TP9383?

Just an aside, but are you that irritatingly good looking former
racing driver, PdC?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1272. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 19:59:15 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <rk255v0a2tfhr81u9r625geopss8nocgkl@4ax.com>
Source record: 37725
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Tue, 18 Feb 2003 08:42:41 GMT, john_c@tpg.com.au (John Crighton)
opined thusly:

[noted and snipped]
>Is this meter for your radio controlled fighting
>robot project?

Yup.

>How is it going?

Slowly! Fortunately there's no rush. :-)
It just occurred to me that despite all these variables concerned with
impedance mis-matches, wrong coax, incorrect ariel length, blah, blah,
blah; the one thing that will tell me at the end of the day whether
I'm getting more useful, radiated power out than the standard tx
provides would be a RFSM. The whole thing is a heck of a headache, to
be honest with you. I can't remember the number of transistors I've
ordered then subsequently discarded as unsuitable for whatever reason.
But I'll get there in the end. It's highly instructional if nothing
else. <shrug>
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1273. Old 70 / 23 cm Tx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 20:17:34 UTC
From: Paul Bicknell <paul.bicknell@ukonline.co.uk>
Message-ID: <3e5294aa$0$5535$afc38c87@news.ukonline.co.uk>
Source record: 37726

I am looking for an Old 70 / 23 cm Tx, Must be home made .,
Preferably built in the 60,s using a Valve set-up .
It is to be used with a Receiver that was built in 1962
by G3HBW Arnold Mynett and received the RSGB Silver Plaque
I am located in west Sussex UK and frequently attend rallies in the midlands

1274. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-18 23:03:20 UTC
From: john_c@tpg.com.au
Message-ID: <3e52a905.9605262@News.CIS.DFN.DE>
Source record: 37727
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Tue, 18 Feb 2003 19:59:15 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Tue, 18 Feb 2003 08:42:41 GMT, john_c@tpg.com.au (John Crighton)
>opined thusly:
>
>[noted and snipped]
>>Is this meter for your radio controlled fighting
>>robot project?
>
>Yup.
>
>>How is it going?
>
>Slowly! Fortunately there's no rush. :-)
>It just occurred to me that despite all these variables concerned with
>impedance mis-matches, wrong coax, incorrect ariel length, blah, blah,
>blah; the one thing that will tell me at the end of the day whether
>I'm getting more useful, radiated power out than the standard tx
>provides would be a RFSM. The whole thing is a heck of a headache, to
>be honest with you. I can't remember the number of transistors I've
>ordered then subsequently discarded as unsuitable for whatever reason.
>But I'll get there in the end. It's highly instructional if nothing
>else. <shrug>
>--
>
>"What is now proved was once only imagin'd"
> - William Blake, 1793

Hello Paul,
here in Sydney, every Saturday morning, one of my vices
is looking at other peoples rubbish from garage sales or
yard sales. Looking for bargains in ordinary householders
front or back yard. Do you have that sort of thing in the UK?

Anyway, you can always pick up some kids abused
and discarded radio control cars for a few dollars.
The receivers and transmitters are usually poor quality
but servos are usually quite good. You never no
your luck and may come across some broken
good quality stuff that is at a near give away price.
The idea being you are buying cheap because it
is broken and you can use your skills to repair it.

With the field strength comparison tests. I used to
borrow my friend's good quality Futaba transmitter,
note the meter reading, then replace his transmitter
with my home made one in the exact position.
Your hands will make a difference, holding it or not.
Same with the field strength meter. All very frustrating.

This Sunday, in Wyong, New South Wales there
is a big amateur radio field day with a buy and sell
of new gear and loads of old stuff from trailers and vans.
I always come back with too much junk. What I am
leading up to tell you is, that these ham get togethers
are great places to buy old pieces of test gear.
Have you got a Sig Gen, CRO, frequency meter?
For example I picked up a nice Marconi 144h
Sig Gen for a friend for $10. The attenuater
was stuffed and a few other things were dud
but old gear like this is easily repairable.

I know you have building a GDO. I have seen
nice ones quite cheap at the field day. If you start
making every item of test gear sometimes you lose
sight of the main objective.
That happened to me with my car rust repairs.
I wanted a tig welder, they were too expensive, so I
decided to make one. I got so involved in building
the welder that I almost lost interest in fixing the car.
In fact, I have still to put the mudguards back on the
little van and get it ready for the trip to Wyong.
All good fun, keep us informed of the robots progress.

Regards,
John Crighton
Sydney

1275. WTD:Heathkit trainers ET-3700 ET-3600

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 00:03:01 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <VQz4a.8575$_c6.895047@newsread2.prod.itd.earthlink.net>
Source record: 37729
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Looking for heathkit trainers models ET-3700 and maybe an ET-3600.Please state price and condition.

1276. FS: NOS 829B+ 832A cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 00:17:37 UTC
From: arfmonger <arficusSPAHM@yahoo.com>
Message-ID: <B2A4a.170239$vm2.121840@rwcrnsc54>
Source record: 37730
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

```
1 NOS RCA 829B orig. box
2 NOS RCA 829B unboxed
1 NOS ken-rad 829B unboxed
1 NU 829A orig. mil. box
2 NOS RCA 832A unboxed.

60% off AES price @ $40, + ship. via insured USPS priority mail.
```

1277. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 00:21:41 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <frh55vckct5u4enelc8pk8jtbbcobef9c5@4ax.com>
Source record: 37731

> You got a lecture. If your nose bothers you again, please
> consult a physician. :-)

Suppressed the main carrier may well be, but the side band(s) aint, and that's where you'll find your resultant carrier(s) :ï¿½)

Lecture or no lecture, you must always have a carrier as the basis of an RF signal, whether it's fixed freq or distributed in the side bands, it's still a carrier :<)

Why are you guys getting so upset, have I offended anyone ?

1278. Re: NOS 829B+ 832A cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 00:58:00 UTC
From: arfmonger <arficusSPAHM@yahoo.com>
Message-ID: <sEA4a.153720$2H6.2996@sccrnsc04>
Source record: 37732
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Sorry for repost, but forgot to mention,
remove SPAHM from email address to reply.

arfmonger <arficusSPAHM@yahoo.com> wrote in message news:...
> 1 NOS RCA 829B orig. box
> 2 NOS RCA 829B unboxed
> 1 NOS ken-rad 829B unboxed
> 1 NU 829A orig. mil. box
> 2 NOS RCA 832A unboxed.
>
> 60% off AES price @ $40, + ship. via insured USPS priority mail.
>
>
>
>

1279. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 01:03:21 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <b1l55vopgvp00umpq79n6qu97vi7jljka9@4ax.com>
Source record: 37733

'Suppressed fundamental carrier' would have been a better description to have been used, 'Suppressed carrier' is all to encompassing - just my thoughts.

It does no harm to discuss things without putting people down you know. Chill out before you give yourselves a hart attack - for your own sakes if not for others.

Clive

1280. Re: Motorola Apps Note AN980

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 01:07:44 UTC
From: Robert Kelley <pasha@kali.com>
Message-ID: <pan.2003.02.19.01.07.40.772602@kali.com>
Source record: 37734

On Tue, 18 Feb 2003 03:16:04 +0000, John Crabtree wrote:

> Path:
> spln!lex!extra.newsguy.com!lotsanews.com!news.maxwell.syr.edu!news.cis.ohio
> -state.edu!ngpeer.news.aol.com!audrey-m1.news.aol.com!not-for-mail
> Lines: 17
> X-Admin: news@aol.com
> From: crabtreejr@aol.com (John Crabtree)
> Newsgroups: rec.radio.amateur.homebrew
> Date: 18 Feb 2003 03:16:04 GMT
> References: <3E517E87.7C76B069@alma.demon.co.uk>
> Organization: AOL http://www.aol.com
> Subject: Re: Motorola Apps Note AN980
> Message-ID: <20030217221604.27943.00000667@mb-cm.aol.com>
> Xref: spln rec.radio.amateur.homebrew:71978
> MIME-Version: 1.0
> Content-Type: text/plain

foo

>
> Gary Morton gary@alma.demon.co.uk on 2/17/03 wrote:
>
>>Has anyone got a copy of this apps note which relates to the use of the
>>MC3362 narrow band FM receiver IC? A Google search just produced >lots of
> references.
>>regards...
>>--Gary
>
> Go to www.motorola.com
> Click on 'Solutions for Semiconductors'
> Click on 'Documentation'
> At the bottom of the page click on
> 'Literature Distribution Center Archived Documents'
> Then do a search for AN980
>
> 73 John KC0GGH

1281. New SXList.com Design Contest!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 01:22:12 UTC
From: Josh Koffman <listsjosh@3mtmp.com>
Message-ID: <3E52DC44.44BAF465@3mtmp.com>
Source record: 37728
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.model.rockets

Hello all. I'm extremely proud to announce the opening of a brand new SXList.com contest! This contest is amazing, there are tons of prizes, and entering isn't that difficult. There are three main categories, and one basically just involves adapting code to the Scenix chip. If you've had an idea for a microcontroller based project, why not check out the Scenix chip? You could win great prizes!

The contest is focused on the Scenix microcontroller (a PIC compatible unit that offers up to 75MIPS). Have an application that needs blazing speed? The Scenix chip is easy to get into and offers tons of speed. By just coming up with an idea, you may win all the development tools you need to put it into action!

If you wish to pass this information on to others, please feel free. The contest is an excellent opportunity for beginners and experts alike. And everyone benefits by the addition of SX examples to the web library.

For complete contest details go to http://www.sxlist.com and follow the Design Challenge Contest link. At the end of this post will be the official release.

Enter soon, and enter multiple times! We look forward to your submissions!

Thanks!

Josh
--
A common mistake that people make when trying to design something completely foolproof is to underestimate the ingenuity of complete fools.
-Douglas Adams

SXList.com 3 WAY WINNER CONTEST

There is a new contest at sxlist.com! And this one has 3 ways to win! Are you a HARDWARE wire head? A SOFTWARE guru? or are you the IDEA person? Anything is ok! You can just send us a good idea, or share a circuit or (learn?) PCB design, or show us some cool code.

Prizes will include SX-Keys, SX chips, SXWiz BASIC to ASM code generator, Ethernet demo boards, RS232 level converters, and your name in lights on SXList.com!

In the past, I've set the focus on nearly finished projects (code ready to debug, design finished, etc...) and we have received some really nice

entries...

http://home.attbi.com/~andrew.g.miller/sx-x10/ The SX-X10 Internet Home Automation Remote Control.
http://www.sxlist.com/lib/io/dev/video/servid.htm The SERVID 4x20 bit banged video terminal.
http://www.sxlist.com/contest/reverb Digital audio reverb and echo effects box.
http://www.sxlist.com/contest/sxohm SX PBX On-hold messaging switch
http://www.sxlist.com/bindicator Bindicator remote display
http://www.sxlist.com/contest/aquamon SX Aquarium Monitor (in SXWiz BASIC)

I'd like to move the focus to a slightly less demanding contest and offer several different points of entry:

A) Ideas that match the SX chips well: What application can you think of for which the SX chips are a perfect fit? Something that could be done in a PIC except for the lower clock speed. Something that needs THROUGHPUT (or that involves doing a bunch of slower tasks all at the same time so that one SX could replace several PICs) but doesn't need a lot of RAM or a huge amount of code. An application where the power supply can support the high speed requirements. Here are some examples: http://www.sxlist.com/idea/sx.htm

B) Great Circuits or Printed Circuit Board Design. Have a really killer little circuit that involves an SX? Then you have an entry! But I want to encourage another path here as well: Right now, AutoTraxEDA is GIVEING AWAY the current (first) release of their professional PCB design software: It supports Mult-sheet schematic entry, circuit simulation, rule driven PCB layout, fast autorouting, 3D visualization and Computer Aided Manufacturing tools. WOW! They will be charging for it at some future date, but for now this is a fantastic deal for the little guys. http://www.autotraxeda.com/Purchase/purchase.html

Co-incidentally, a PCB manufacturer is giving away PCB panels in return for posting a public design using a compatible processor. SX is ok. See: http://www.sxlist.com/piclist/pcbcontest These are limited to double side, 160x100 mm, solder mask, component print and must follow the guidelines posted at http://www.olimex.com/pcb/techinfo.html but you get an entire
panel free and the quality is great! So... Design a PCB using an SX, if you haven't done one before, this is a great opportunity to learn and you can get a fantastic design program FREE. If you win, I'll throw in one or more of the prizes above in addition to your PCBs.

C) Code snippets: Any bit of code that does something better, faster, or that hasn't been published already on the SXList.com site. If you can't publish the entire project, but you have one part that you are especially proud of, share it (and let the world know who you are). Lots of people have published something on sxlist.com and been amazed at the number of questions, thank you's and even, sometimes, yes, actual paying

jobs! Come on! You've figured out something that you're jazzed about! Show us what you got! Just starting? No problem: Browse the PICList code library http://www.piclist.com/lib or PICList archive and find some code that you would like to see in an SX. Use the MPASM to SASM code converter:
http://www.sxlist.com/cgi-bin/mpasm2sasm2.exe and then check for any warnings and clean up the code for the SX.

The prizes are nice, entering is easy... I expect to be overwhelmed with entries! Use the little form at the bottom of the webpage to describe your entry and/or send the files to JamesNewton@sxlist.com

1282. HP 8590A xtal f ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 01:52:29 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v55or1rqldep6b@corp.supernews.com>
Source record: 37735

On an HP 8590A can anyone tell me the fundamental frequency of A9Y1 cal
xtal that is multiplied to 299.9 kHz.
tnx
hank wd5jfr

1283. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 02:30:32 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <j1r55vch5e83cfqb838pb6v7qos371mh6i@4ax.com>
Source record: 37736

On Wed, 19 Feb 2003 01:03:21 +0000,
c.a.m@nospamherethanks.blueyonder.co.uk wrote:

>
>'Suppressed fundamental carrier' would have been a better description to have
>been used, 'Suppressed carrier' is all to encompassing - just my thoughts.
>
>It does no harm to discuss things without putting people down you know. Chill
>out before you give yourselves a hart attack - for your own sakes if not for
>others.
>
>Clive

Well Clive, let me take a stab at it.

Others have described SSB operation and AM operation superbly.

You will see some elementary explanations of how AM works by
describing the "carrier" as "carrying the modulating or voice
frequencies". It was a simple way of describing an AM signal.

The word "carrier" is really a misnomer. The "carrier" doesn't really
carry anything. In an AM signal it just happens to be present with the
two side bands. All independent of each other as far as propagation
goes.

There is only one meaning of "Carrier" that I am aware of when talking
about a basic AM or SSB signal. Any information or signal in a side
band is not referred to as a carrier or having a carrier.

Each RF frequency stands on its own and propagates all by itself
regardless of what else is present or not present in the composite
signal. One signal component does not need any of the other signal
components to get where it is going.

73
Gary K4FMX

1284. Re: Solid state AM Modulation-Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 02:45:17 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <lor55vcfmoqv48f9uubp0itaf0i85ie0l9@4ax.com>
Source record: 37737

>Others have described SSB operation and AM operation superbly.

yup, I agree.

> You will see some elementary explanations of how AM works by
>describing the "carrier" as "carrying the modulating or voice
>frequencies". It was a simple way of describing an AM signal.
>
>The word "carrier" is really a misnomer. The "carrier" doesn't really
>carry anything. In an AM signal it just happens to be present with the
>two side bands. All independent of each other as far as propagation
>goes.
>
>There is only one meaning of "Carrier" that I am aware of when talking
>about a basic AM or SSB signal. Any information or signal in a side
>band is not referred to as a carrier or having a carrier.
>
>Each RF frequency stands on its own and propagates all by itself
>regardless of what else is present or not present in the composite
>signal. One signal component does not need any of the other signal
>components to get where it is going.

This is true :)

Clive

1285. Overtone Xtal ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 05:51:51 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v566rpdjnoiv89@corp.supernews.com>
Source record: 37738

I have a deaf HP 8590A spectrum analyzer with no Cal. output and this may be the reason for deafness because I'm told that a mixer frequency is derived from the same oscillator. I don't have a manual, schematic, block diagram or extender boards. The Calibration frequency is supposed to be 299.9MHz and comes from the A9 board. The A9 board has a half height TO-5 cased xtal in a 2N5971 circuit and as best I can tell the xtal is connected to the emitter. With the A9 board out on the bench and using my Kenwood DM-81 dip meter I get a good dip at approximatley 30.5 MHz. I'm not sure if this is the fundamental or not but if it is they must be using the 9th overtone, does that make sense?
I have an old HP 141T with a 8553L and I jury rigged a small probe that I could snake into A9 thru a cal hole and I could barely see a blip around 10 Mhz and 26 Mhz. Not sure of these frequencies because I didn't write them down and it's late. Then I connected a piece of wire wrap wire to the base of the transistor that is fed by the 2N5971 and again I could see a couple of very weak signals that I know where coming from A9 because I turned the 8590 on and off. And this is where it got interesting. When I turned the 8590 on, for a short period of time I could see a nice blip that decayed in about a second. I'm guessing that the overtone crystal is lazy, cracked, or some associated circuit component is bad. There are 2 adjustments on the board that I haven't touched, a trimpot for amplitude and a coil slug for frequency. The coil is 4 turns on a 3/16" core. I haven't turned either but am tempted to. (A couple years ago I bought a non-working Racal 1992 counter and I found that the OCXO had no output and after checking everything and finding nothing wrong I gave a slug a turn and it came to life. As best as I can recall Racal derive 10 MHz from 5 MHz but this wouldn't be overtone. But I had the service manual and had less fear of turning slugs).
I've not had an experience with overtone oscillators and am looking for help. All suggestions appreciaed.
tnx
hank wd5jfr

1286. Re: WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 08:56:03 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <bvjl6REja0U+EwgO@fslife.co.uk>
Source record: 37739

>Just an aside, but are you that irritatingly good looking former
>racing driver, PdC?

You're thinking of Alain De Cadenet (spelt correct)

No relation.

His daughter Amanda is better looking than me.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1287. Re: Need schematic for relative field-strength meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 10:19:48 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <ktk65v882c1cghr2562907j7j8hhmi1nlu@4ax.com>
Source record: 37740
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Tue, 18 Feb 2003 23:03:20 GMT, john_c@tpg.com.au (John Crighton)
opined thusly:

>Hello Paul,
>here in Sydney, every Saturday morning, one of my vices
>is looking at other peoples rubbish from garage sales or
>yard sales. Looking for bargains in ordinary householders
>front or back yard. Do you have that sort of thing in the UK?

We do indeed. We call them "boot sales" because householders typically
turn up with a boot-full of their old curiosities. BTW - an aside to
our American chums - "boot" in UK = "trunk" in Americanese.
Problem is, they're almost invariably on a Sunday mornings and start
at some obscene time like 6am. I don't get out of bed on Sundays until
my hangover is gone, so that's usually getting on for noon. Sadly I
don't get to frequent any boot sales. :-(

[...]
>This Sunday, in Wyong, New South Wales there
>is a big amateur radio field day with a buy and sell
>of new gear and loads of old stuff from trailers and vans.
>I always come back with too much junk. What I am
>leading up to tell you is, that these ham get togethers
>are great places to buy old pieces of test gear.
>Have you got a Sig Gen, CRO, frequency meter?
>For example I picked up a nice Marconi 144h
>Sig Gen for a friend for $10. The attenuater
>was stuffed and a few other things were dud
>but old gear like this is easily repairable.

You're absolutely right, but all the hamfests seem to be in the north
of England and a good 100+ miles away. I don't suppose that seems like
much to you, but us Brits it's like the other side of the world!

> I know you have building a GDO. I have seen
> nice ones quite cheap at the field day. If you start
>making every item of test gear sometimes you lose
>sight of the main objective.
>That happened to me with my car rust repairs.
>I wanted a tig welder, they were too expensive, so I
>decided to make one. I got so involved in building
>the welder that I almost lost interest in fixing the car.

I find exactly the same problem, too. But now I'm finally wise to it,
I find I don't lose the plot so easily. But you're absolutely right:

these diversions can be perilous!
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1288. Wanted antenna for HP 117A comparator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-19 14:40:46 UTC
From: Dennis <douglasfir@charter.net>
Message-ID: <Xns9327584DBECFFdouglasfircharternet@216.168.3.44>
Source record: 37741
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

Hi

need the antenna for the HP 117A Comparator. The OEM had an input
voltage of 35VDC, I guess for the pre-amp.Will pay a reasonable amount.

TIA!

Dennis

1289. Radio tubes inventory left to liquidate.!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 02:36:46 UTC
From: "." <erpi@revelstoke.net>
Message-ID: <2bX4a.96470$Q_1.2382472@news2.telusplanet.net>
Source record: 37742
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello everyone....I am selling a balance of tubes from a radio shop who closed a few months ago because of the owner sickness...there are about 400 tubes all in their boxes.....they are mainly radio tubes (said he had barely nothing to do with TV.) about 85 to 90% of them are NOS....according to the prices of the tubes these days...I think that .60 - .70 cents each would be a killer deal....so I'll ask $275.00 plus shipping for the whole lot...(picture of the whole lot available..let me know)...for any question..feel free to contact me.....thanks....

1290. Radio tubes inventory left to liquidate.!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 02:37:33 UTC
From: "." <erpi@revelstoke.net>
Message-ID: <NbX4a.96477$Q_1.2383580@news2.telusplanet.net>
Source record: 37743
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello everyone....I am selling a balance of tubes from a radio shop who closed a few months ago because of the owner sickness...there are about 400 tubes all in their boxes.....they are mainly radio tubes (said he had barely nothing to do with TV.) about 85 to 90% of them are NOS....according to the prices of the tubes these days...I think that .60 - .70 cents each would be a killer deal....so I'll ask $275.00 plus shipping for the whole lot...(picture of the whole lot available..let me know)...for any question..feel free to contact me.....thanks....

1291. Re: Radio tubes inventory left to liquidate.!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 02:40:57 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ZeX4a.29570$P1.2400811@news1.east.cox.net>
Source record: 37744
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

A list of the tube types would help.

Peter

"." <erpi@revelstoke.net> wrote in message
news:2bX4a.96470$Q_1.2382472@news2.telusplanet.net...
> Hello everyone....I am selling a balance of tubes from a radio shop who
> closed a few months ago because of the owner sickness...there are about
400
> tubes all in their boxes.....they are mainly radio tubes (said he had
barely
> nothing to do with TV.) about 85 to 90% of them are NOS....according to
the
> prices of the tubes these days...I think that .60 - .70 cents each would
be
> a killer deal....so I'll ask $275.00 plus shipping for the whole
> lot...(picture of the whole lot available..let me know)...for any
> question..feel free to contact me.....thanks....
>
>

1292. Old motorola transistor info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 05:01:24 UTC
From: kc0atc@qsl.net
Message-ID: <a444e1b1.0302192101.2fd9a465@posting.google.com>
Source record: 37745

this is the RF power amp in a Regency HR-2B.
It is marked

M
695-1
024

I have some others at hand marked 695-3 and 695-9.
Are they interchangeable?

Any other info?

Thanks!

chris
transistor.at.yipyap.dot.com

1293. FS- AIR COOLED TETRODES

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 06:10:40 UTC
From: Don <don-com@attbi.com>
Message-ID: <Aj_4a.170510$iG3.21205@sccrnsc02>
Source record: 37746

FORCED AIR COOLED TETRODES....

For Sale 4CX-250's brand new in Military Cartons and Canisters.Standard heater voltages not Military Only. Some B,R and FG models. In addition We also have some 7034 models as well.

They are not your typical swap-meet prices but if you want quality and functional products we have them. And their not as expensive as buying them from many of the main suppliers.

We have about 12 pairs left in inventory now and they are not going to last much longer and it will probably be 90 days before we can get in some replacements. Supplies are getting more difficult to find as time goes on.

In addition, we have some USED TUBES as well. We do have some that have low hours on them and some pulls but they are all functional. You must test them within 14 days of receiving the unit/units. We cannot be responsible for their operation if you keep them on the shelf for 3 months and then tell me they don't work. If you are not satisfied with our products you pay to return them to us, and you will be refunded the cost of the tube/tubes.

Shipping and handling costs are in addition to the price of the tubes and will depend on your zip code. Shipments CONUS only. Insurance is advisable and is available if you request so at the time you place the order.

Please serious inquiries only.

VALVES R US.
Sacramento, CA

1294. FA: 10 ceramic FT-243 crystal sockets - never used

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 09:47:44 UTC
From: "Roy C. Pollitt" <pollitt1794@sunline.net>
Message-ID: <b3294001g2v@enews1.newsguy.com>
Source record: 37597
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

now on eBay:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3009173605&
rd=1

1295. FT-277:Problem in the LF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 13:32:50 UTC
From: Bjorn Henrik Vangstein <no.sp@m.no>
Message-ID: <IO45a.30141$Rc7.428923@news2.e.nsc.no>
Source record: 37598

I have an old Yaesu FT-277 which I use as a mobile rig. But I have a problem with the LF-stage. Some time (5-10 minutes) after I have switched the power on, the speaker sound nearly disappear - it's very weak. Instead I hear some weak locally generated sounds and after some time (from some seconds to several minutes) the sound level (with a sharp and loud click) comes back to normal. I believe that the problem is that the circuit on the LF-card goes into self oscillations. Does anyone have some tips on how to cure this problem?

73 de LA5MDA, Henrik
Oslo

1296. High performance antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 14:34:58 UTC
From: Heinz Bolli <heinz.bolli@hbag.ch>
Message-ID: <3e54e710$1_3@news.bluewin.ch>
Source record: 37599

Hi all

We are constructing a new antenna tuner/matchbox especially for symmetric antennas. The most important featueres will be:

- Matching of symmetric antennas
- 1.8 to 30 MHz
- High impedance matching range, capability for compensation of high reactive loads. (50 Ohm to up to 3000 Ohm +/- 3000 Ohm reactive)
- High power handling (up to 2 kW)
- Remotable and/or automatic function
- Working in Transmit- AND Receive-Mode (with ICOM-Transceivers)
- Matching unit for outdoor mounting (near antenna feedpoint)
- Control unit for indoor use (near Transceiver)

We are looking for techincal interested amateurs for broad field tests. We offer a absolute high quality unit from our pre-series for a fair price.

Interested? Then contact immedialtely:

Heinz Bolli HB9KOF

HEINZ BOLLI AG
Ruetihofstrasse 1
CH-9052 Niederteufen / Switzerland

Phone: +41 71 333 4833
Fax: : +41 71 333 4843

1297. Doppler Radio Direction Finder - Ramsey DDF1 kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 15:18:09 UTC
From: cwolf01@attglobal.net
Message-ID: <dfcb9d69.0302200718.1297adba@posting.google.com>
Source record: 37600

After reading the QST May/June 1999 article, by Mike Kossor WA2EBY, on Doppler RDF; I'm interested in purchasing the Ramsey Doppler RDF kit (DDF1). Ramsey's catalog says that the kit is based on the WA2EBY design.

Does anyone have any experience with performance of the completed kit?

How does it compare to other D-RDF designs such as the Roanoke?

There also is a "kit" available from Mouser Electronics. Does anyone have any experience with this "kit"?

Thanks -73-
Charlie Wolf KD6VIZ

1298. Re: WTB: BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 22:06:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3e554d6c.77213626@news.online.no>
Source record: 37601

On Tue, 18 Feb 2003 18:23:19 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Hello Jan,
>
>>You must be joking, OM.
>>2m 15W 28V standard SOT48 case shouldn't be difficult to find.
>>Motorola replacement is 2N5641, while replacement for BLY92C is
>>2N5642, so I would check up the data for for the latter device
>>
>>Could pass you few pages from the Philips handbook on an occasion
>If you have spec on the original BLY92A device then I would very much
>appreciate a copy.
>
>What about the same for the TP9383?
>
have been somewhat busy. No I have only Motorola RF device manual and
series of Philips books, quite old but should cover the BLY92. Those
TRW devices are difficult to find data for,
If you still need some data, drop me a note as email

73
Jan-Martin
http://www.laud.no/la6nca/LA8AK/la8ak/index.htm
--
remove ,xnd to reply

1299. Re: need spec sheet for CA3035

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 22:06:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3e554f71.77730825@news.online.no>
Source record: 37602

On Mon, 17 Feb 2003 20:59:45 -0500, scharkalvin <wa2mze@bellsouth.net>
wrote:

>Mark Zenier wrote:
>>>Does anyone have a copy of a spec sheet for the RCA
>>>CA3035 op amp?
>>
>> It's not really an op-amp, just a collection of 3 gain blocks.
>>>These were used in the TenTec PM1 and Heath HW7, maybe the HW8 and PM2
>>>and 3 as well.
>>
>> ftp://ftp.eskimo.com/u/m/mzenier/RCA3035.pdf
>>
>> (Yea, just one page. From the 1976 RCA databook).

suggest you analyze the schematics and consider rewire for using LM358
or LM324. The data indicates 40kHz bandwidth and it shouldn't be
difficult to beat, suppose it is not the real question...

73
Jan-Martin
http://www.laud.no/la6nca/LA8AK/la8ak/index.htm
--
remove ,xnd to reply

1300. FA: AM-6155/GRT-22 FAA Surplus Linear power amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 22:48:50 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <mXc5a.46081$4F3.2869627@news2.east.cox.net>
Source record: 37603
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

AM-6155/GRT-22 FAA Surplus Linear power amp, Specs: 225-400MHz, 50W out (conservative) 10W in, Eimac X651Z/8930 final, extensive metering, can be converted to 2m, 220 or 432, rack mount 7" high, 80 lbs, ITT (model 3212), Part of AN/GRT-22. This Amp uses Emiac X651Z/8930 in silver-plated cavity-drawer; 175-turn TUNE counter dial. Main chassis has solid-state power supply and buffer amp/mulitplier; panel meter monitors voltages. Requires 105/120/210/240 VAC 50-400 Hz and +20 V req 60 ma. +20 V keyed; 7x19x18.5, 80 lbs shipping weight. The HV Supply from AM-6154 is Loaded with GREAT parts to include a 1752V at 270ma transformer, 8HY 300ma choke, 100K ohm 95 watt resistor, 2x5mfd 3KVDC capacitor, & rectifier circuits card. Most hams use these amps as a 2m or 220 Mhz or 432 Mhz Linear. After conversion, the output power is approximately 400 watts. One ham has used a 4CX400A (available from Svetlana)to raise the output power to 450 Watts. Do a Google search of AM-6155 and you will find many references to conversion information. Used - Excellant Condition (NOT TESTED) but sold AS-IS.. Email if you have any questions. Buyer will pay shipping (approx 90 lbs) from zip 31088 and a packing charge of $20.00. I will ensure the item is packed to survive the trip!

73, Larry Keith KQ4BY

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3009041615

1301. FM radio microphoney

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-20 23:29:05 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E55657B.CB8AAE44@alma.demon.co.uk>
Source record: 37604

I'm working on my second 6m FM receiver. It's based around the Motorola MC3362P device. With a simple coil change I hope to try to get it working on 2m. The receiver has been built on a single sided PCB with flying leads to attach to the synthesisor control chip (MC145170P). Tuning is accomplished via a PIC based micro with keypad and LCD display. An external amplifier was connected.

I tuned into a transmission but found that if I tried to increase the volume there was horrible audio oscillation. I also noted that just touching the circuit with a scope probe caused an audio response from the speaker (it is remarkably sensitive!). Eventually I tried lifting the speaker up from the desk and holding it away from the circuit and I was able to crank the volume control up higher. So I now suspect that the microphoney problem was causing the audio oscillations.

I have tapped various components, even though there aren't many in this circuit. My suspicion falls on:-
1) the 10.245MHz xtal
2) the tuning coil (but it is wound on a plastic former and coated with laquer)
3) the 455kHz demodulator IF coil (the metal case is grounded)

If I hold the above components manually the microphoney problem is still there.

Any ideas as to what might be causing this?

regards...

--Gary

1302. Re: FM radio microphoney

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 00:16:51 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <Tde5a.62507$zF6.4309033@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37605

Do you have adequate "bypassing" on the audio portion of the circuit?

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Special Offer thru April
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3E55657B.CB8AAE44@alma.demon.co.uk...
> I'm working on my second 6m FM receiver. It's based around the Motorola
> MC3362P device. With a simple coil change I hope to try to get it
> working on 2m. The receiver has been built on a single sided PCB with
> flying leads to attach to the synthesisor control chip (MC145170P).
> Tuning is accomplished via a PIC based micro with keypad and LCD
> display. An external amplifier was connected.
>
> I tuned into a transmission but found that if I tried to increase the
> volume there was horrible audio oscillation. I also noted that just
> touching the circuit with a scope probe caused an audio response from
> the speaker (it is remarkably sensitive!). Eventually I tried lifting
> the speaker up from the desk and holding it away from the circuit and I
> was able to crank the volume control up higher. So I now suspect that
> the microphoney problem was causing the audio oscillations.
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> I have tapped various components, even though there aren't many in this
> circuit. My suspicion falls on:-
> 1) the 10.245MHz xtal
> 2) the tuning coil (but it is wound on a plastic former and coated with
> laquer)
> 3) the 455kHz demodulator IF coil (the metal case is grounded)
>
> If I hold the above components manually the microphoney problem is still
> there.
>
> Any ideas as to what might be causing this?
>
> regards...
>
> --Gary

1303. Re: FM radio microphoney

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 01:16:30 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045790185.814726@auth2.dns.griffin.net.uk>
Source record: 37606

vco coil...common problem in kenwood pmr sets..cure..fill the vco screening
can with heat glue..etc...or if feeling very lazy use external speaker.
"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3E55657B.CB8AAE44@alma.demon.co.uk...
> I'm working on my second 6m FM receiver. It's based around the Motorola
> MC3362P device. With a simple coil change I hope to try to get it
> working on 2m. The receiver has been built on a single sided PCB with
> flying leads to attach to the synthesisor control chip (MC145170P).
> Tuning is accomplished via a PIC based micro with keypad and LCD
> display. An external amplifier was connected.
>
> I tuned into a transmission but found that if I tried to increase the
> volume there was horrible audio oscillation. I also noted that just
> touching the circuit with a scope probe caused an audio response from
> the speaker (it is remarkably sensitive!). Eventually I tried lifting
> the speaker up from the desk and holding it away from the circuit and I
> was able to crank the volume control up higher. So I now suspect that
> the microphoney problem was causing the audio oscillations.
>
> I have tapped various components, even though there aren't many in this
> circuit. My suspicion falls on:-
> 1) the 10.245MHz xtal
> 2) the tuning coil (but it is wound on a plastic former and coated with
> laquer)
> 3) the 455kHz demodulator IF coil (the metal case is grounded)
>
> If I hold the above components manually the microphoney problem is still
> there.
>
> Any ideas as to what might be causing this?
>
> regards...
>
> --Gary

1304. motorola rf transistor identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 01:21:28 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045790484.53334@auth2.dns.griffin.net.uk>
Source record: 37607

its marked up 4021..i expect uhf about 40w???
0.5inch pill package.date code 1988
any ideas on spec or equivalent??
thanks
simon g0zen

also sd1407does anyone have info on running these at vhf class c..ie max power out and gain..

thanks

1305. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 01:31:18 UTC
From: larry <larya24@hotmail.com>
Message-ID: <Gjf5a.24359$b8v1.8368@news04.bloor.is.net.cable.rogers.com>
Source record: 37608

The black band, at one end of the diode, designs the cathode end of the diode.

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message news:rwuQ9.9016$us1.8688@news.bellsouth.net...
> Uh, didn't germanium diode have marking like that? And used in SWP/Watt
> meters?
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
> Remove the obvious from Email.
>
>
>
> "Tony" <nospam@shoveit.com> wrote in message
> news:MHpQ9.74392$6H6.2787018@twister.austin.rr.com...
> > It's in the HF/VHF sensor of the Diamond SX-1000 watt meter. The meter was
> > hit by lightning and I'm rebuilding it. I use a 1N914 and it's not
> working
> > right (the meter that is) so I'm guessing that there is something special
> > about it?
> >
> >
> >
> > "Tony" <nospam@shoveit.com> wrote in message
> > news:T5QP9.62029$6H6.2464019@twister.austin.rr.com...
> > > Can't figure out what kind of diode this is??
> > >
> > > Looks like a 1N914 but (glass and about the same size) BUT it has a
> BLACK
> > > and WHITE line on it? LIKE THIS BELOW!
> > >
> > > B W
> > > _________
> > > ---| | | |---
> > > ----------------
> > >
> > >
> > >

> > >
> > >
> > > Sign up for Paypal and make me $5.00
> > >
> > > https://www.paypal.com/refer/pal=WHRP8XHRMLSX4
> > >
> > >
> >
> >
>
>
>

1306. Re: High performance antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 01:47:21 UTC
From: "Edward A. Feustel" <efeustel@erols.com>
Message-ID: <b340dc$oj2$2@bob.news.rcn.net>
Source record: 37609

You ought to look at the Bliss Automatic Balanced Antenna Tuner.
http://airwaterkinginc.purification.com/bzmmremotemotor.html
It will be a strong competitor. Let me know if your price point is
significantly less. Palstar also offers a Balanced Tuner, but not
an automatic one.

Ed, N5EI

"Heinz Bolli" <heinz.bolli@hbag.ch> wrote in message
news:3e54e710$1_3@news.bluewin.ch...
> Hi all
>
> We are constructing a new antenna tuner/matchbox especially for symmetric
> antennas. The most important featueres will be:
>
> - Matching of symmetric antennas
> - 1.8 to 30 MHz
> - High impedance matching range, capability for compensation of high
> reactive loads. (50 Ohm to up to 3000 Ohm +/- 3000 Ohm reactive)
> - High power handling (up to 2 kW)
> - Remotable and/or automatic function
> - Working in Transmit- AND Receive-Mode (with ICOM-Transceivers)
> - Matching unit for outdoor mounting (near antenna feedpoint)
> - Control unit for indoor use (near Transceiver)
>
> We are looking for techincal interested amateurs for broad field tests. We
> offer a absolute high quality unit from our pre-series for a fair price.
>
> Interested? Then contact immedialtely:
>
> Heinz Bolli HB9KOF
>
> HEINZ BOLLI AG
> Ruetihofstrasse 1
> CH-9052 Niederteufen / Switzerland
>
> Phone: +41 71 333 4833
> Fax: : +41 71 333 4843
>
>
>

1307. FA: ST and loctal tubes no reserve

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 08:48:37 UTC
From: arfmonger <arficusSPAHM@yahoo.com>
Message-ID: <FJl5a.180619$SD6.9464@sccrnsc03>
Source record: 37610
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Lot of NOS and used Loctal tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160956789

NOS and used ST shouldered tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160984300

1308. Wavetek 3000-200 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 10:57:27 UTC
From: pdrunen@aol.com
Message-ID: <20030221055727.10013.00000028@mb-mh.aol.com>
Source record: 37611

Hi Group,

I have a Wavetek unit that has what appears to be a shorted cap in one of the modules. I need to remove the module to get inside it. Looking at the bottom, it appears that the module is held in place with a screw and something that looks like a stand off.

Question is how to get the module out, if there are anything I would look out for while removing it.

Thanks,

Paul

1309. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 13:42:20 UTC
From: "Raul Z. Martínez" <raul.martinez@nospam.helsinki.fi>
Message-ID: <b35abs$h2r$1@oravannahka.helsinki.fi>
Source record: 37612

Still in time to revive this thread, I hope... I was browsing through the newsgroups looking for information regarding frequency mixers and run into the thread. Although my application is not related to radio, this is probably the place to ask, people here seem to have a great deal of experience with mixers.

I have one of the aforementioned SRA-3 mixers, and have found an unexpected behavior in my test configuration: right now I am just testing it to determine noise levels and see what the best conditions of operation (RF and LO power, etc) are. Of course these parameters are given in the specs sheet, but it is always a good idea to get familiar with new devices, and I am completely new to mixers.

Anyway, I am testing the mixer at 10 MHz (the frequency at which I'll have to work) by just using two function generators to send two sinusoidal 10 MHz signals into the RF and LO ports. The signal levels are just slightly below the ones recommended by the manufacturer for linear operation (+1 dBm for the RF port and +7 for the LO port for a 50 Ohm load). The two signals I am sending in are not exactly of the same frequency: they differ by a few tens of Khz, so at the IF output I expect to see the higher order sideband (around 20 MHz) and the lower order one (these tens of kHz) together with some 10 MHz leakage from the LO and RF ports, and perhaps some higher harmonics.

The IF port is terminated with a 50 Ohm resistor to ground, while the RF and LO signals come directly from the generators into the ports without further filtering or attenuation (I am using 50 Ohm coaxial cables about 1m long). I tested that both generators have no problem to give sinusoidal signals of the required amplitude into 50 Ohm resistive loads (just by using the 50 Ohm input of a scope). All the grounds of the mixer (the three ports plus the case ground) are tied together.

What I observe in this configuration is that when I connect the sinusoidal signals to the RF and LO ports both waveforms experience a great deal of distortion: they get flatter at the peaks and seem to show higher frequency ripple. I have measured this with a 1 MOhm scope probe to avoid perturbing the system. The output at the IF port has the right frequency components, the two expected sidebands plus a little 10 MHz leakage, but the waveforms are also quite ugly, not at all sinusoidal (which is of course to be expected given that the waveforms at the input ports are badly distorted).

I don't know exactly why I am seeing this distortion at the input ports... Is it normal behavior for a mixer? If I understand correctly how a mixer is suposed to behave, the baluns just transfer the impedance of whatever comes after it, in this case the resistive load at the IF port, so

my signal generators should be seeing a 50 Ohm load. Yet the distortion in the waveforms seem to indicate that there is something else going on, like reflections on an impedance barrier or something like it. I just can't figure out what.

I've also seen that people use attenuation pads at the mixer ports (to absorb reflections, I imagine). Would this improve the situation here?

I'd really appreciate any information about this topic. Thanks in advance!

1310. Re: Old motorola transistor info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 15:11:49 UTC
From: kc0atc@qsl.net
Message-ID: <a444e1b1.0302210711.43929481@posting.google.com>
Source record: 37613

Found on NTE cross reference web site

regency 695-1 --> NTE350.

nevermind.

kc0atc@qsl.net (Chris) wrote in message
news:<a444e1b1.0302192101.2fd9a465@posting.google.com>...
> this is the RF power amp in a Regency HR-2B.
> It is marked
>
> M
> 695-1
> 024
>
>
> I have some others at hand marked 695-3 and 695-9.
> Are they interchangeable?
>
> Any other info?
>
> Thanks!
>
> chris
> transistor.at.yipyap.dot.com

1311. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 15:27:52 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b35ghqjja1@slb4.atl.mindspring.net>
Source record: 37614

This is a quick guess, but you are driving the mixer diodes with a sine wave with just barely enough to turn them on. So, yes, the impedance is shifting as the diodes are marginally turning on and off.

Generally, I prefer to use a hard square wave on the LO input to the mixer, since this reduces the interval where the diodes are transiting between off and on. The transit time is when the diode junctions are most prone to intermod.....

Anyway, the main point is, you are driving a dynamic load, and so it does distort the waveform, particularly the LO input.

Jim Pennell
N6BIU

1312. Re: Wavetek 3000-200 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 17:06:33 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18bffc72d1745e5d989775@192.168.42.131>
Source record: 37615

In article <20030221055727.10013.00000028@mb-mh.aol.com>, pdrunen@aol.com says...

> Hi Group,
>
> I have a Wavetek unit that has what appears to be a shorted cap in one of the
> modules. I need to remove the module to get inside it. Looking at the bottom,
> it appears that the module is held in place with a screw and something that
> looks like a stand off.
>
> Question is how to get the module out, if there are anything I would look out
> for while removing it.

Strongly recommend that you get a service manual for that beastie before tearing into it. I've worked on Wavetek gear, and it can be quite the nightmare without a book.

http://www.manualsplus.com should be able to help.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

1313. Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 18:12:29 UTC
From: Ale55andro <AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it>
Message-ID: <vtqc5vg463nee31n5riou9n1nblqbc04p8@4ax.com>
Source record: 37616

I would build a rig (SSB+CW), QRP. 20-30W

I was wondering where I can build
the very reliable kit (with everything
is needed...case, silkscreen panel and so on)

Thanks in advance
Ale

1314. Re: FM radio microphoney

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 18:28:05 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <b37i55$377$1@newsg4.svr.pol.co.uk>
Source record: 37628

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3E55657B.CB8AAE44@alma.demon.co.uk...

[deleted]

> I tuned into a transmission but found that if I tried to increase the
> volume there was horrible audio oscillation. I also noted that just
> touching the circuit with a scope probe caused an audio response from
> the speaker (it is remarkably sensitive!). Eventually I tried lifting
> the speaker up from the desk and holding it away from the circuit and I
> was able to crank the volume control up higher. So I now suspect that
> the microphoney problem was causing the audio oscillations.

[deleted]

Ceramic capacitors (especially ceramic disc) are often microphonic.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1315. possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 21:08:46 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <un4d5v810n4q6a7slmdn4r3bkn56le1f5i@4ax.com>
Source record: 37617
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi,

I'm just having to make up the last coil for my grid dip oscillator (the plug-in coils that do the 'sniffing') Problem is, the previous ones were all air-cored whereas this one has to have a ferrite core. With the air-cored ones, I just routed the return connection from the outer end of the coil back through the middle of the hollow coil former. When there's a solid core, I can't do this. Is it okay to just route the return wire straight down the outer edge of the windings? It would be in physical but not electrical contact with them all. I'm not concerned about any minor change in inductance value by doing this, but is that all it should amount to? Or am I going to screw something up this way?

p
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1316. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 21:13:32 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e56964d$0$118$edfadb0f@dtext02.news.tele.dk>
Source record: 37618
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hello Paul

> former. When there's a solid core, I can't do this. Is it okay to just
> route the return wire straight down the outer edge of the windings? It
> would be in physical but not electrical contact with them all. I'm not
> concerned about any minor change in inductance value by doing this,
> but is that all it should amount to? Or am I going to screw something
> up this way?

No problem in doing so, it's the normal way to do it.

Regards Max

1317. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 21:16:19 UTC
From: troglodite@aol.com
Message-ID: <20030221161619.25518.00000099@mb-fc.aol.com>
Source record: 37619

>
>I'm just having to make up the last coil for my grid dip oscillator
>(the plug-in coils that do the 'sniffing') Problem is, the previous
>ones were all air-cored whereas this one has to have a ferrite core.
>With the air-cored ones, I just routed the return connection from the
>outer end of the coil back through the middle of the hollow coil
>former. When there's a solid core, I can't do this. Is it okay to just
>route the return wire straight down the outer edge of the windings? It
>would be in physical but not electrical contact with them all. I'm not
>concerned about any minor change in inductance value by doing this,
>but is that all it should amount to? Or am I going to screw something
>up this way?

William,

There really isn't any other way to do it, and the effect on the final inductance, especially with a ferrite core, will be negligable. You might want to protect the wire by coating the final coil with epoxy, or by fitting it into a plastic tube. (Pharmacy bottles sometimes work well.) Oops, I guess it would be "chemist bottles" over there.

One other possibility would be to place a piece of insulating sleeving against the ferrite slug before winding, and thread the wire through it after winding, but that sounds like more trouble than it's worth.

Doug Moore KB9TMY

1318. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 22:05:00 UTC
From: Rick Merrill <RickMerrill@att2.com>
Message-ID: <3E56A28C.9080503@att2.com>
Source record: 37620
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge wrote:
> Hi,
>
> I'm just having to make up the last coil for my grid dip oscillator
> (the plug-in coils that do the 'sniffing') Problem is, the previous
> ones were all air-cored whereas this one has to have a ferrite core.
> With the air-cored ones, I just routed the return connection from the
> outer end of the coil back through the middle of the hollow coil
> former. When there's a solid core, I can't do this. Is it okay to just
> route the return wire straight down the outer edge of the windings? It
> would be in physical but not electrical contact with them all. I'm not
> concerned about any minor change in inductance value by doing this,
> but is that all it should amount to? Or am I going to screw something
> up this way?
>
> p

Professional coils are often designed so that the final turn
winds up where the first turn started. Small changes in wire
size or coil width are often all it takes to do this. But your
way will not hurt anything. - RM

1319. Re: Doppler Radio Direction Finder - Ramsey DDF1 kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-21 23:40:11 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E56B8DE.277B6557@silverstar.com>
Source record: 37621

My favorite null detector with ONE DEGREE repeatable accuracy is from a design pioneered by the Happy Flyers, a group of ham-pilots. It uses a EXAR 211 FSK chip to detect signals picked up by two 1/4-wave whips switched by a 50-50 multivibrator, compared in the Exar chip and feeding two sets of signals out. One set to red/green LEDs to tell one which way to swing the two-antenna array to get to the null "slot" and the other to either a 100-0-100 uA meter for 10-0-10 degree null capture or a 50-0-50 uA meter for finer work. I've built three and used them with helpers to track down jammers and foulmouths. Board/manual sets used to be available from Hart Postlethwaite, WB6CQW, International Commander of the Happy Flyers from his QTH in San Carlos, California.

Anecdote in literature concerned a CAP major flying right seat in a Cessna 182 taking off from Red Bluff, California and flying north to Mt. Ashland in Oregon, tracking an ELT using two pieces of copper tape stuck to windshield of plane. Pilot wearing blue goggles and windshield having yellow mylar attached to it so pilot can have no view of outside world and thus fly on instruments 5,000 feet AGL, using zero-center microammeter as homing device. After flight ended, major stated he watched as plane flew over grove of trees with only vehicle in sight about 300 feet off to side of flight path as meter pointer swung from side to side. Driver of van said he thought it impossible for dead stick pilot to be able to miss the only tree/s in landing so he had put ELT in that grove of trees over which the plane flew.

Charlie wrote:

> After reading the QST May/June 1999 article, by Mike Kossor WA2EBY, on
> Doppler RDF; I'm interested in purchasing the Ramsey Doppler RDF kit
> (DDF1). Ramsey's catalog says that the kit is based on the WA2EBY
> design.
>
> Does anyone have any experience with performance of the completed kit?
>
> How does it compare to other D-RDF designs such as the Roanoke?
>
> There also is a "kit" available from Mouser Electronics. Does anyone
> have any experience with this "kit"?
>
> Thanks -73-
> Charlie Wolf KD6VIZ

1320. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 00:54:21 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <1vhd5vs7mbujl1ltc8m6aj2tvkvr3okf1r@4ax.com>
Source record: 37622
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 21 Feb 2003 21:08:46 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>
>Hi,
>
>I'm just having to make up the last coil for my grid dip oscillator
>(the plug-in coils that do the 'sniffing') Problem is, the previous
>ones were all air-cored whereas this one has to have a ferrite core.
>With the air-cored ones, I just routed the return connection from the
>outer end of the coil back through the middle of the hollow coil
>former. When there's a solid core, I can't do this. Is it okay to just
>route the return wire straight down the outer edge of the windings? It
>would be in physical but not electrical contact with them all. I'm not
>concerned about any minor change in inductance value by doing this,
>but is that all it should amount to? Or am I going to screw something
>up this way?

Prob'ly not, but if you're worried about it why don't you bring the
ends of the winding out at 90ï¿½ from the axis of the coil and detect
sideways?^)

Or, wind two layers arranged so that both leads exit from the same end
of the coil(s)
--
John Fields
Professional circuit designer
http://austininstruments.com

1321. 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 02:01:03 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045879264.329522@auth2.dns.griffin.net.uk>
Source record: 37623

looking for construction details/even a kit, but would rather build own, for
a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v
mosfet design.
any ideas? must be someone out there (in USA?) with info..
thanks.
simon g0zen

1322. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 02:35:43 UTC
From: Bill Baily <BBY@Scooter.net.au>
Message-ID: <3e56e200$0$10325$afc38c87@news.optusnet.com.au>
Source record: 37624
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"John Fields" <jfields@austininstruments.com> wrote in message
news:1vhd5vs7mbujl1ltc8m6aj2tvkvr3okf1r@4ax.com...
> On Fri, 21 Feb 2003 21:08:46 +0000, Paul Burridge
> <redscar@waitrose.notthisbit.com> wrote:
>
> >
> > >Hi,
> > >
> > >I'm just having to make up the last coil for my grid dip oscillator

Snipped for brevity

> Prob'ly not, but if you're worried about it why don't you bring the
> ends of the winding out at 90° from the axis of the coil and detect
> sideways?^)
>
> Or, wind two layers arranged so that both leads exit from the same end
> of the coil(s)
> --
> John Fields
> Professional circuit designer
> http://austininstruments.com

Can I offer my favourite way of protecting such windings when you are done.
Take a roll of white plumbers Teflon tape. Unroll about 10cms and twiddle it
between your fingers to make a twisted thread. Put one turn of the twist
around the lower end of the coil and then wind on as many flat turns, with
some stretch on, as makes sense for your particular coil. Finish the coil
protection by twiddling a similar length at the finish and tying the threads
together with a double knot. A careful touch with the barrel of the
soldering iron should do a partial melt to lock the knot. There are few
dielectric effects with Teflon to cause errors. This kind of tape is one of
those fixit-all solutions for the home and workshop. Keep some handy.
Luck.
BillB

1323. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 02:42:46 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <GsB5a.190682$SD6.9119@sccrnsc03>
Source record: 37625

> looking for construction details/even a kit, but would rather build own,
for
> a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v
> mosfet design.
> any ideas? must be someone out there (in USA?) with info..
> thanks.
> simon g0zen

Take a look at the Philips data sheet on their BLF278. (Similar to the MRF
151 Gemini.)

W4ZCB
>
>

1324. ATV with a microwave oven

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 04:46:12 UTC
From: w7wkm@cs.com
Message-ID: <3b3debaa.0302212046.3cee6ec1@posting.google.com>
Source record: 37626

Greetings All:

In the July 1989 73 Amateur Radio magazine there was an article by
David Pacholok, KA9BYI.

At one time I had a copy of the article but HO VE! no longer.

Does anyone still have a copy?

Thanks

Bil Munsil
W7WKM HAM TV
Tucson AZ
w7wkm@cs.com

1325. T/R switching for a 100W 2mtr amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 04:52:50 UTC
From: kc0atc@qsl.net
Message-ID: <a444e1b1.0302212052.442c2f34@posting.google.com>
Source record: 37627

I would like to employ the power amplifier section from an
Aerotron mobile unit as a 2mtr amp. Looking at the
components, it looks like it should be good for 75-100 watts
output with a drive of about 100mw. I will be using
a small handheld to drive it.

My question: can someone give me some information about
T/R switching for this thing? I'm thinking I can do
some kind of detection circuit like in this 40 mtr
amp:
http://www.fix.net/~jparker/norcal/miniboots/miniboot.htm

and then run a relay... is that the right way to go?
Do I need to switch both the input and the output
sides of the power amp? and if I do, then it seems like
I'll need a relay that can handle 100W of RF. Is that
an unusual item or will a pedestrian 12 volt relay do that?

I looked into using PIN diodes, but I don't know how to go
about it.

thanks for any advice...

Chris
kc0atc
amp.at.yipyap.dot.com

1326. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 10:49:45 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-EDEF6F.05494522022003@netnews.attbi.com>
Source record: 37629

In article <vtqc5vg463nee31n5riou9n1nblqbc04p8@4ax.com>,
Ale55andro
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@t
ele2.it> wrote:

> I would build a rig (SSB+CW), QRP. 20-30W
>
> I was wondering where I can build
> the very reliable kit (with everything
> is needed...case, silkscreen panel and so on)
>
> Thanks in advance
> Ale

http://www.elecraft.com

72/73
John Seney, WD1V [FN42]
QRP ARCI 10345 K2 #1388
Icom 756 Pro II
FIST #5014 CC: 1151
HP Velo Recumbent Biker
http://www.qsl.net/wd1v

1327. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 11:33:57 UTC
From: Ale55andro <AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it>
Message-ID: <fvne5vg1bt4qoj7cs21pcucajolh5koolf@4ax.com>
Source record: 37630

On Sat, 22 Feb 2003 10:49:45 GMT, JS <wd1v@amsat.org> wrote:

>http://www.elecraft.com
I would be interested in K1-2
Which two bands do you suggest to start?
The ATU is a must-have?
Thanks again
Ale

1328. Looking for 2SC2181

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 12:01:16 UTC
From: 9A2TK <tomislav.kaltnecker@kr.tel.hr>
Message-ID: <b37opk$cb9u$1@as201.hinet.hr>
Source record: 37631

I am looking for VHF power transistor 2SC2181 for my Tokyo HY-POWER Amplifier HL-160V.

73, Tom 9A2TK

1329. Re: Looking for 2SC2181

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 12:30:45 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <V3K5a.64744$zF6.4483596@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37632

http://www.rfparts.com/2sc.html

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Special Offer thru April
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"9A2TK" <tomislav.kaltnecker@kr.tel.hr> wrote in message
news:b37opk$cb9u$1@as201.hinet.hr...
> I am looking for VHF power transistor 2SC2181 for my Tokyo HY-POWER
> Amplifier HL-160V.
>
> 73, Tom 9A2TK

1330. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 14:01:37 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <650f5vkib79vn86rqhl5lfcj61hilcm9dk@4ax.com>
Source record: 37633
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Sat, 22 Feb 2003 13:35:43 +1100, "Bill Baily" <BBY@Scooter.net.au>
opined thusly:

>Can I offer my favourite way of protecting such windings when you are done.
>Take a roll of white plumbers Teflon tape. Unroll about 10cms and twiddle it
>between your fingers to make a twisted thread. Put one turn of the twist
>around the lower end of the coil and then wind on as many flat turns, with
>some stretch on, as makes sense for your particular coil. Finish the coil
>protection by twiddling a similar length at the finish and tying the threads
>together with a double knot. A careful touch with the barrel of the
>soldering iron should do a partial melt to lock the knot. There are few
>dielectric effects with Teflon to cause errors. This kind of tape is one of
>those fixit-all solutions for the home and workshop. Keep some handy.
>Luck.

Thanks. I was intending to use some of that heat-shrink sleeving to
encapsulate the finished coil, but now you've got me worrying about
the possibility of worsening any inter-turn parasitic capacitance!
:-(
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1331. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 16:09:49 UTC
From: "Raul Z. Martínez" <raul.martinez@nospam.helsinki.fi>
Message-ID: <b387ciobn1@oravannahka.helsinki.fi>
Source record: 37634

Jim Pennell wrote:

> This is a quick guess, but you are driving the mixer diodes with a sine
> wave with just barely enough to turn them on. So, yes, the impedance is
> shifting as the diodes are marginally turning on and off.
>
> Generally, I prefer to use a hard square wave on the LO input to the
> mixer, since this reduces the interval where the diodes are transiting
> between off and on. The transit time is when the diode junctions are
> most prone to intermod.....
>
> Anyway, the main point is, you are driving a dynamic load, and so it
> does
> distort the waveform, particularly the LO input.
>
>
>
> Jim Pennell
> N6BIU

Thanks for the answer, Jim. Yes, I understand what you mean, the signals applied have to turn the diodes on first to "discover" the 50 ohm load placed after the mixer. It makes sense that they get distorted, and I suppose there is no way around it.

I have tried your suggestion of increasing the LO drive power to (and slightly above) the design level of the mixer, and although it didn't make a big difference it improved things a little. I wasn't very far below before (something like +5dBm instead of +7), and minicircuits specifies that just a slightly worse conversion efficiency is to be expected if one uses lower LO powers (within reasonable limits, of course, which I guess it means just what you said, enough voltage to turn the diodes on).

One thing I wonder about, though, is the effect of using a square wave for the LO instead of a sine. I see why it would be cleaner to open the diodes this way, but thinking of it mathematically, wouldn't this also produce more unwanted components at the IF port as a side effect? After all a square wave can be described as a Fourier superposition of a number of components, and that means that when you send a 10 MHz square wave, together with your 10 MHz base frequency, you are sending also a bunch of -much weaker- harmonics at 20, 30, 40... MHz into the LO port.

Minicircuits application notes -and your own experience- clearly indicate that a square wave CAN be used to drive the LO, and that one can even get better results (less noise) than with a sine, so I am obviously wrong here, but I don't know why... Perhaps the reason is that for this to

have an adverse effect one would have to assume that a mixer is a perfect mathematical multiplier, which it is not... it just uses nonlinear components to produce an effect similar to a multiplication, and these nonlinear components (diodes) have a closer-to-ideal behavior when they are turned on by square waves that minimize transit times. This is just my speculation, anyway.

1332. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 16:27:30 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e57a4c3$0$140$edfadb0f@dtext02.news.tele.dk>
Source record: 37635
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hello Paul

> Thanks. I was intending to use some of that heat-shrink sleeving to
> encapsulate the finished coil, but now you've got me worrying about
> the possibility of worsening any inter-turn parasitic capacitance!

No problein in using the Heat-Shrink tubing, my factory made
dip meter is made that way.

Regards Max

1333. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 17:06:55 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b38anh$b9$1@slb6.atl.mindspring.net>
Source record: 37636

Actually, as regards a square wave LO compared to a sine wave in a diode mixer, there are a couple of things to keep in mind....

Due to the required switching action in the diodes, assuming enough drive to definifively turn the diodes on, the diodes themselves will act as a harmonic generator for the LO signal.

So, the mixer will have a lot of harmonic energy from the LO in any case. True, a sine wave LO will result in slightly lower amounts of harmonics, but they WILL be there.

A square wave LO drive results in somewhat higher harmonic energy, but it reduces the interval of time where the diodes are marginally ON/OFF and this will give slightly better protection against intermod products of various signals coming in from the RF port.

Also, by causing the diodes to be hard on or off more of the time, there is a littl more energy getting to the IF port and hence slightly less total insertion loss.

For a reciever, a square wave LO drive tends to be the better choice. Generally speaking, the RF port is low pass protected from seeing any signals at harmonics of the LO frequency so the slightly higher levels generated by a square wave LO drive don't have anything to mix with.

Jim
N6BIU

1334. Century 21 S-meter mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 17:57:56 UTC
From: Bill Walker <kwalker@earth1.net>
Message-ID: <3e57b9a5$1_4@corp.newsgroups.com>
Source record: 37637

I have successfully modified my Ten Tec Century 21 transceiver, which has a power input meter but no s-meter, to allow the power meter to double as an s-meter.

Switching is automatic through diodes. A slight adjustment of the power calibration pot is required. Works great!

If you want schematics, pics, details, e-mail me.

kwalker@earth1.net

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1335. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 20:58:24 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <QvR5a.1230$ID6.2810@newsc.telia.net>
Source record: 37638

You can't go wrong with Elecraft www.elecraft.com

73's Per SM0WRA
"Ale55andro"
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.
it> skrev i meddelandet news:vtqc5vg463nee31n5riou9n1nblqbc04p8@4ax.com...
> I would build a rig (SSB+CW), QRP. 20-30W
>
> I was wondering where I can build
> the very reliable kit (with everything
> is needed...case, silkscreen panel and so on)
>
> Thanks in advance
> Ale

1336. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 21:50:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3e57f05d.250024181@news.online.no>
Source record: 37639

On 12 Feb 2003 00:02:46 -0800, remove_ok1sip@atlas.cz (OK1SIP) wrote:

>Look at http://w1.859.telia.com/~u85920178/use/gdo.htm
>
>73 de Ivan OK1SIP

put some more information on my site http://home.online.no/~la8ak/
pse excuse me as I have little experience in this, and will eventually
change some details later

73
Jan-Martin
--
remove ,xnd to reply

1337. Yaesu FT-901/902 mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 21:55:04 UTC
From: la8ak.xnd@online.no
Message-ID: <3e57f165.250288320@news.online.no>
Source record: 37640

Have had many requests for mods and have published som mods for FT902
and other equipment

Cannot give complete details for all mods since most were carried out
in 1988. Pse excuse me, I am only a beginner in making sites

73 Jan-Martin
http://home.online.no/~la8ak/
--
remove ,xnd to reply

1338. [FA] microwave goodies - 1.7-2.0GHz VCOs, SAW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-22 23:26:00 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0302221526.238fd738@posting.google.com>
Source record: 37641

VCO 1.7 to 2.0 GHz 10 pcs voltage controlled
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7286&item=2510819878&rd=1

112MHz SAW filter 1MHz BW 10 pcs
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7288&item=2510914352&rd=1

39MHz SAW filters Video IF TV 10 pcs dutch
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7288&item=2510564023&rd=1

1339. transistor spec help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 01:14:15 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1045962921.801214@auth2.dns.griffin.net.uk>
Source record: 37642

can anyone help in supplying the spec on the following rf power
transistors??

CD4442
SD1019-5
PT8783
PT8726
motorola 4021 made by mot. for ? in house no??

thanks simon g0zen

1340. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 01:22:18 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v5g8l4o3b2bn4e@corp.supernews.com>
Source record: 37643

Ale

You might also try www.smallwonderlabs.com for stuff a little more moderately priced.

I love my K1 to death, however <g>. The ATU is pretty nice, but whether it's a "must have" really depends on your operating plans and antenna situation.

The choice of bands also depends on your particular operating interests. 20/40 seems to be the most popular choice, 40 meters is the place where the winter foxhunts live, and 20 is where they hold the summer foxhunts.

If you really hate contests, maybe 30 should be one of your choices. If you operate mostly in the daytime perhaps something like 20/15 would be a better choice.

If you are new to QRP, and want to meet with other QRPers, then 20/40 (14.060/7.040) is a good choice. However, 40 is not a terrifically QRP friendly band except in the dead of winter. Still, it can be a lot of fun. 30 is probably better if you prefer ragchews, less noise and QRM. Keep in mind that 20 closes in the mid evening during the winter in the northern climates, and as the spots decline over the next few years it will get earlier. (I sort of assume that wd1v means you are likely in New England).

Really depends so much on what you want to do...

..

"Ale55andro"
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it> wrote in message news:fvne5vg1bt4qoj7cs21pcucajolh5koolf@4ax.com...
> On Sat, 22 Feb 2003 10:49:45 GMT, JS <wd1v@amsat.org> wrote:
>
> >http://www.elecraft.com
> I would be interested in K1-2
> Which two bands do you suggest to start?
> The ATU is a must-have?
> Thanks again
> Ale
>

1341. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 01:26:35 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v5g9d6bmmorvdc@corp.supernews.com>
Source record: 37644

Sorry, looks like I got my email addresses confused, .it doesn't sound like New England <g>, but still, pretty far north compared to most of the U.S. *BUT*, you now have the European 40 meter band to contend with.

I haven't heard reports from European hams about the K1, but it has a 602 first mixer, which bodes ill for 40 meter operation in Europe. It's got the best implementation of a 602 I've seen, but perhaps you may think twice about 40.

..

"Ale55andro"
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it> wrote in message news:fvne5vg1bt4qoj7cs21pcucajolh5koolf@4ax.com...
> On Sat, 22 Feb 2003 10:49:45 GMT, JS <wd1v@amsat.org> wrote:
>
> >http://www.elecraft.com
> I would be interested in K1-2
> Which two bands do you suggest to start?
> The ATU is a must-have?
> Thanks again
> Ale
>

1342. Re: T/R switching for a 100W 2mtr amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 03:39:17 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0302221939.63397393@posting.google.com>
Source record: 37645

Chris, a few random thoughts:

Keep an eye on harmonics and sproggies from the HT. An unwanted signal at -50dB carrier is much less of a problem from an HT than from a 100W PA - if you see what I mean. I can explain further if you want.

Being somewhat conservative when it comes to RF over a few tens of watts, I personally would go for a Relay over PIN diodes every time. A reasoanable Coax relay for the PA side of things, a small short contact relay on the HT side.

100W / 50 ohms is at least 70V RMS and about 1.4 Amps RMS to put things in perspective.

TX sequencing - I hate the idea of trying to switch 100W of RF (arcs, RFI, destroyed PA etc.). Should be pretty simple to sequence HT/PA/Relay so that Relay has moved to TX position before PA has engaged -- and PA has been disengaged before relay drops back to RX.

Regards, Mark. G8JVX, KE6LVK, G6ANI/T etc. etc.

---

kc0atc@qsl.net (Chris) wrote

I would like to employ the power amplifier section from an Aerotron mobile unit as a 2mtr amp. Looking at the components, it looks like it should be good for 75-100 watts output with a drive of about 100mw. I will be using a small handheld to drive it.

My question: can someone give me some information about T/R switching for this thing? I'm thinking I can do some kind of detection circuit like in this 40 mtr
amp:

http://www.fix.net/~jparker/norcal/miniboots/miniboot.htm

and then run a relay... is that the right way to go? Do I need to switch both the input and the output sides of the power amp? and if I do, then it seems like I'll need a relay that can handle 100W of RF. Is that an unusual item or will a pedestrian 12 volt relay do that?

I looked into using PIN diodes, but I don't know how to go about it.

thanks for any advice... Chris kc0atc, amp.at.yipyap.dot.com

1343. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 04:09:12 UTC
From: Bill Baily <BBY@Scooter.net.au>
Message-ID: <3e584968$0$10325$afc38c87@news.optusnet.com.au>
Source record: 37646
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

> >dielectric effects with Teflon to cause errors. This kind of tape is one
of
> >those fixit-all solutions for the home and workshop. Keep some handy.
> >Luck.
>
> Thanks. I was intending to use some of that heat-shrink sleeving to
> encapsulate the finished coil, but now you've got me worrying about
> the possibility of worsening any inter-turn parasitic capacitance!
> :-(
> --
>
> "What is now proved was once only imagin'd"
>
- William Blake, 1793

SHRINK TUBE !!! Well durn me, some busybody has gorn and invented a better way. I don't rightly know that this 'ere shrink tube will catch on in this part of the world. We like our string and baling wire solutions for most situations. Particularly helpful back in '43 when knicker elastic just couldn't be had no matter how many eggs you offered. Unfortunately string went in short supply right after the elastic and me dear old duck just stamped her foot over the baling wire solution. Stamped a bit too hard actually and that was the last of the hold-me-ups for the duration and a bit beyond. In the end she didn't really mind - "less laundry" she said. I digress. Can you twist a few threads of this 'ere Shrink stuff to make gland packing string for taps and pumps etc? I guess I am going to have to try this stuff.

BillB

1344. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 05:53:41 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E5861E9.E25974EA@silverstar.com>
Source record: 37547

Motorola RF Data Manuals give Ap Notes and Engineering Bulletins on building a 300 watt 2-30 MHz module then connecting four for 1KW+. Parts lists, schematics, PC board patterns and parts layouts as well as transformer construction for interstage matching and power combining of the four modules.

Personally, I'd rather construct a Class E amp which can give 92% efficiency with 5% parts and up to 98% with 1% resistors and NPO caps. Now if I could just relocate the construction artivcle. I was browsing through Intel's in-house library one day and came across a "sidebar" article by the fellow who had applied for the patent on that class of amplification. I photocopied the article, took it home and built up a 40-watt amp to use when camping with Heath SSB Rig. It worked GREAT. Lost the rigs and all my papers in move from San Jose to Sparks, Nevada. Keep thinking one day I'll come across the article again. Unfortunately it's not in the archives of Electronics or Electronic Design. Too old an issue I guess.

"Harold E. Johnson" wrote:

> > looking for construction details/even a kit, but would rather build own,
> for
> > > a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v
> > > mosfet design.
> > > any ideas? must be someone out there (in USA?) with info..
> > > thanks.
> > > simon g0zen
>
> Take a look at the Philips data sheet on their BLF278. (Similar to the MRF
> 151 Gemini.)
>
> W4ZCB
> >
> >

1345. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 05:58:17 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E5862FE.BD37FFAB@silverstar.com>
Source record: 37548

MRF159 Gemini is good for 10 MHz - 150 MHz according to Motorola RF Data Manual Vol. 2 although construction article in May, '93 issue of 73 Amateur Radio Today claims 12W in/200W out; 7 MHz to 225 MHz, all mode; no tuning [PCB set available from F.A.R. for 7.95 - probably more now] all fits in box 1" x 1" x 1" exclusive of COR.

"Harold E. Johnson" wrote:

>
> Take a look at the Philips data sheet on their BLF278. (Similar to the MRF
> 151 Gemini.)
>
> W4ZCB
> >
> >

1346. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 08:45:15 UTC
From: Ale55andro <AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it>
Message-ID: <1d2h5vogm71ulafaoo6h4ospgtulqfbmke@4ax.com>
Source record: 37549

On Sat, 22 Feb 2003 20:22:18 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>You might also try www.smallwonderlabs.com for stuff a little more
>moderately priced.

Nice...very low price.
Same perfomances like K1 (of course, according to you) ?
Thanks again
Ale

1347. AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 09:27:07 UTC
From: Aaron Staple <astaple@stanford.edu>
Message-ID: <Pine.GSO.4.44.0302230126460.20594-100000@elaine35.Stanford.EDU>
Source record: 37550

Hi,
I'm looking for a simple and cheap AM radio IC that will handle
tuning and demodulation. Basically, I'd just like to connect it to an
antenna in and an audio out and do tuning digitallly via another
input. I don't care much about sound quality. Does anyone have any
suggestions for an IC I could use?

Thanks,
Aaron Staple

1348. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 11:20:11 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <1Qb6a.743$VD4.246448@newsfep1-win.server.ntli.net>
Source record: 37564

> >http://www.elecraft.com
> I would be interested in K1-2
> Which two bands do you suggest to start?
> The ATU is a must-have?
==========
Bands : probably 40 or 80 m and 20 m
ATU : Depends of which type of antenna you intend using
If you can accommodate a 'universal dipole' which is a half wavelength on 80m it can be made working on all HF bands.
It has a balanced feeder being 300 or 450 ohms ribbon or an open wire feeder being 2 wires separated by insulating spacers.
Such a system needs a balanced matching unit (tuner if you wish) which can be readily built from junk box /flea market components.

If you will be using an antenna with coaxial feeder ,most built-in tuners will be fine for that.

So before considering a matching unit (ATU) decide on the type of HF antenna you intend using. That decision will largely depend on the available space and local government regulations.

The Elecraft K-2 seems a fine trx and I wish you much success with its construction.

Frank gm0csz.kn6wh@ntlworld.com

1349. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 11:55:12 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <5Qb6a.744$VD4.246448@newsfep1-win.server.ntli.net>
Source record: 37565

> I'm looking for a simple and cheap AM radio IC that will handle
> tuning and demodulation. Basically, I'd just like to connect it to an
> antenna in and an audio out and do tuning digitallly via another
> input. I don't care much about sound quality. Does anyone have any
> suggestions for an IC I could use?
==========
Suggest the MK484 radio on a chip , 3 legged IC (like a TO92 package
transistor) costing $ 1.00 to 1.50

Frank gm0csz.kn6wh@ntlworld.com

1350. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 12:10:03 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <vS26a.209361$tq4.5305@sccrnsc01>
Source record: 37551

You've made a small error, It wasn't me that made the inquiry but G0ZEN. I'm the one that suggested the BLF 278. Nate Cohen had the patent on the class E amp, but I believe it has run it's course. It was patented already back in 1969. It's not the accuracy of the parts used but rather the values that effect class "E" operation.

W4ZCB
I didn't write the below either except for the response..

> Personally, I'd rather construct a Class E amp which can give 92% efficiency
> with 5% parts and up to 98% with 1% resistors and NPO caps. Now if I could just
> relocate the construction artivcle. I was browsing through Intel's in-house
> library one day and came across a "sidebar" article by the fellow who had
> applied for the patent on that class of amplification. I photocopied the
> article, took it home and built up a 40-watt amp to use when camping with Heath
> SSB Rig. It worked GREAT. Lost the rigs and all my papers in move from San Jose
> to Sparks, Nevada. Keep thinking one day I'll come across the article again.
> Unfortunately it's not in the archives of Electronics or Electronic Design. Too
> old an issue I guess.
>
> "Harold E. Johnson" wrote:
>
> > > looking for construction details/even a kit, but would rather build own,
> > for
> > > a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v
> > > mosfet design.
> > > any ideas? must be someone out there (in USA?) with info..
> > > thanks.
> > > simon g0zen
> >
> > Take a look at the Philips data sheet on their BLF278. (Similar to the MRF
> > 151 Gemini.)
> >
> > W4ZCB

1351. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 13:55:20 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <60jh5v0atg0vlsk0jt3a2165dvb8tp2bpl@4ax.com>
Source record: 37552

On Sun, 23 Feb 2003 01:27:07 -0800, Aaron Staple
<astaple@stanford.edu> opined thusly:

>Hi,
> I'm looking for a simple and cheap AM radio IC that will handle
>tuning and demodulation. Basically, I'd just like to connect it to an
>antenna in and an audio out and do tuning digitallly via another
>input. I don't care much about sound quality. Does anyone have any
>suggestions for an IC I could use?

Try an MK484. Should be able to pick one up for just over a dollar.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1352. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 16:13:44 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b3arvq$3l9$1@slb9.atl.mindspring.net>
Source record: 37553

"Per Enocson" <per.enocson@telia.com> Wrote:

> You can't go wrong with Elecraft www.elecraft.com
>
> 73's Per SM0WRA
> "Ale55andro"

As regards strong signal performance, check the Elecraft site for performance data. If memory serves, it is one of the better rigs on the market for that feature and if you live in an area with a lot of RF running around you may need the strong signal handling capability.

Jim
N6BIU

1353. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 19:05:06 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046027106.979135@auth2.dns.griffin.net.uk>
Source record: 37554

thanks guys

it looks like its between the blf278 x2
or the mrf 151g x2..

all i need now is advice on weather to use lumped wilkinson or make it out
of 75r ptfe mini coax..
really needes to have + - 10% of centre frequency without needing tuning or
getting lossy...
coax method wilkinson looks easier and has more bandwidth...
simon

any thoughts on blf279 vs mrf 151g
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1045879264.329522@auth2.dns.griffin.net.uk...
> looking for construction details/even a kit, but would rather build own,
for
> a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v
> mosfet design.
> any ideas? must be someone out there (in USA?) with info..
> thanks.
> simon g0zen
>
>

1354. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 20:17:15 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0302231217.35553fb6@posting.google.com>
Source record: 37555

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1045879264.329522@auth2.dns.griffin.net.uk>...

> looking for construction details/even a kit, but would rather build own, for

> a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably 28/50v

> mosfet design.

> any ideas? must be someone out there (in USA?) with info..

> thanks.

> simon g0zen

Try the VHF/UHF DX Book by G3SEK. A pair of 4CX250s
isn't exactly a pair of MOSFETs, but would probably be
a lot easier to get right...

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

1355. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 21:01:55 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v5idmakclm7h0a@corp.supernews.com>
Source record: 37556

Jim

Gotta keep the rigs straight. The K2 is tough to beat on almost any spec.
It's IM is right up there with the $5K rigs. But the K1 is a lower priced,
lower performance rig. Still a dandy rig, but probably not what you would
want to be using on 40 from the middle of Europe.

..

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:b3arvq$3l9$1@slb9.atl.mindspring.net...
>
> "Per Enocson" <per.enocson@telia.com> Wrote:
>
> > You can't go wrong with Elecraft www.elecraft.com
> >
> > 73's Per SM0WRA
> > "Ale55andro"
>
>
> As regards strong signal performance, check the Elecraft site for
> performance data. If memory serves, it is one of the better rigs on the
> market for that feature and if you live in an area with a lot of RF
running
> around you may need the strong signal handling capability.
>
>
> Jim
> N6BIU
>
>
>
>

1356. CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 21:09:44 UTC
From: Adam Adkins <no@way.com>
Message-ID: <MPG.18c2f495f8e8ae0c98968b@netnews.attbi.com>
Source record: 37557
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Recently I have been trying to use 1/2" CATV hardline to feed my vertical antenna. The cable is a little larger diameter as LMR-400 or any other .405 OD coax. It has a solid center conductor with foam dialectric that is glued to the center conductor. The jacket is aluminum, and there is no PVC outer jacket. The connector was crafted from a PL-259 and a brass double female 1/2" compression fitting. That experience has taught me a couple of things, and raised some questions. If anyone has any helpful comments about the following, I would really appreciate hearing them.

I discovered very quickly how a kink in the cable is a disaster. Thirty feet from the end of a 200 foot run, the cable kinked and the outer metal jacket ruptured. Bleah. How disappointing.
Can anyone tell me good, cheap and durable ways to splice the cable?

Talking to a friend, I mentioned that I didn't plan to bury the cable but for a short run to make sure it isn't run over with the tractor. He asked me, "Wouldn't that change the impedance?" I had to admit that I don't know, but didn't think it would since the jacket is ground anyway.
I could not find the answer to this question anywhere. Can anyone tell me whether buried / not buried will change the impedance of this feed line? Are there advantages to burying the entire run? Are there any wild aluminum eating creatures that nibble holes in hardline?

Finally, does anyone care to share any hard-won experience, or pointers to complete information, or whatever?

Thanks in advance for any help,

73,

Adam Adkins, KM5N

1357. Re: transistor spec help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 21:14:46 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <aRa6a.2184$vU3.252639@newsread1.prod.itd.earthlink.net>
Source record: 37558

zindazenda <zen@lineisp.co.uk> wrote in message
news:1045962921.801214@auth2.dns.griffin.net.uk...
> can anyone help in supplying the spec on the following rf power
> transistors??
>
> CD4442
> SD1019-5

Similar to 2N6166 30 W, 150 MHz, 13.5 V, 4.5db
100W, 150 MHz, 28V, 6db

> PT8783
> PT8726
> motorola 4021 made by mot. for ? in house no??
>
> thanks simon g0zen
>
>

1358. Re: Looking for 2SC2181

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 21:31:53 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7Qb6a.745$VD4.246448@newsfep1-win.server.ntli.net>
Source record: 37566

> I am looking for VHF power transistor 2SC2181 for my Tokyo HY-POWER
> Amplifier HL-160V.
========
Check with Mainline Electronics -Leicester ,UK sales@mainlinegroup.co.uk
The part is in their (old) catalogue costing GBP 41.65 (approx equiv.
US$ 60.-)
Another source would be Barend Hendriksen - Brummen -Netherlands
www.barendh.com

Frank gm0csz.kn6wh@ntlworld.com

1359. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 21:53:44 UTC
From: Mark <markg0usl@hotmail.com>
Message-ID: <9rb6a.4576$Ax1.1654@news-binary.blueyonder.co.uk>
Source record: 37559

"Aaron Staple" <astaple@stanford.edu> wrote in message
news:Pine.GSO.4.44.0302230126460.20594-100000@elaine35.Stanford.EDU...
> Hi,
> I'm looking for a simple and cheap AM radio IC that will handle
> tuning and demodulation. Basically, I'd just like to connect it to an
> antenna in and an audio out and do tuning digitallly via another
> input. I don't care much about sound quality. Does anyone have any
> suggestions for an IC I could use?
>
> Thanks,
> Aaron Staple
>
>
ZN414 is what you are looking for it is an AM radio in a 8pin DIL package

Best 73 de Mark G0USL

1360. Re: possible problem winding coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 22:29:05 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5iipvhd963481@corp.supernews.com>
Source record: 37560
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I have a Kenwood DM-81 and I think it's one of the best made and very
convenient to use. It has a socket for testing xtals and a probe to couple
to difficult items. All the coils are in clear shrinnk tubing with the cloi
number and freq. range on a piece of paper. It's a great idea.
73
hank wd5jfr
"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:un4d5v810n4q6a7slmdn4r3bkn56le1f5i@4ax.com...
>
> Hi,
>
> I'm just having to make up the last coil for my grid dip oscillator
> (the plug-in coils that do the 'sniffing') Problem is, the previous
> ones were all air-cored whereas this one has to have a ferrite core.
> With the air-cored ones, I just routed the return connection from the
> outer end of the coil back through the middle of the hollow coil
> former. When there's a solid core, I can't do this. Is it okay to just
> route the return wire straight down the outer edge of the windings? It
> would be in physical but not electrical contact with them all. I'm not
> concerned about any minor change in inductance value by doing this,
> but is that all it should amount to? Or am I going to screw something
> up this way?
>
> p
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

1361. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-23 23:14:27 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b3bkkl$4q0$1@slb0.atl.mindspring.net>
Source record: 37561

"xpyttl" <xpyttl_nospam@earthling.net> Wrote:
Sent: Sunday, February 23, 2003 1:01 PM
> Jim
>
> Gotta keep the rigs straight. The K2 is tough to beat
> on almost any spec.
>
> It's IM is right up there with the $5K rigs. But the K1
> is a lower priced, lower performance rig. Still a dandy
> rig, but probably not what you would want to be using on
> 40 from the middle of Europe.
>

I knew the K2 is a great rig, but you are right in that I'd forgotten the difference in performance in the K1.

Thanks for pointing that out, it's been awhile since I looked at the website...

Jim Pennell
N6BIU

1362. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 00:20:48 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb5ipau.bpq.nobody@animas.frontier.net>
Source record: 37562
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 23 Feb 2003 21:09:44 GMT, Adam Adkins hath writ:
> Recently I have been trying to use 1/2" CATV hardline to feed my
> vertical antenna. The cable is a little larger diameter as LMR-400 or
> any other .405 OD coax. It has a solid center conductor with foam
> dialectric that is glued to the center conductor. The jacket is
> aluminum, and there is no PVC outer jacket. The connector was crafted
> from a PL-259 and a brass double female 1/2" compression fitting. That
> experience has taught me a couple of things, and raised some questions.
> If anyone has any helpful comments about the following, I would really
> appreciate hearing them.
>
> I discovered very quickly how a kink in the cable is a disaster.
> Thirty feet from the end of a 200 foot run, the cable kinked and the
> outer metal jacket ruptured. Bleah. How disappointing.
> Can anyone tell me good, cheap and durable ways to splice the
> cable?

Can't help you there. I've only `slightly` kinked either the 1/2"
or the 3/4" stuff but once each -- and it did not burst and I'm
gonna live with it.

> Talking to a friend, I mentioned that I didn't plan to bury the
> cable but for a short run to make sure it isn't run over with the
> tractor. He asked me, "Wouldn't that change the impedance?" I had to
> admit that I don't know, but didn't think it would since the jacket is
> ground anyway.

Mox nix -- being ground. What you'll get is a smashed tube - with
the outer wall much closer to the inner conductor - giving you
(perhaps many - depending on how active the tractor) impedance `bumps`.

[Oh, now that I've re-read the question: No, burying the hardline
directly, or in-directly will *not* alter the impedance. sri]

> I could not find the answer to this question anywhere. Can anyone
> tell me whether buried / not buried will change the impedance of this
> feed line? Are there advantages to burying the entire run? Are there
> any wild aluminum eating creatures that nibble holes in hardline?

Without _any_ poly jacket, you need to worry about electrolysis and/or
the PH of the soil. If it were me: I'd bury it in some black poly pipe.
'Twould be a feat to stuff in a looooooong run of it...

> Finally, does anyone care to share any hard-won experience, or
> pointers to complete information, or whatever?

http://www.jonz.net/W3DHJ/catvhardline.html

...but, none of my CATV HardLine comes even close to the ground.
Out thru the basement window -- along the side of the house --
and up inside of a 40' tower.

HTH es 73,
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1363. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 00:24:36 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E596644.3090907@bellsouth.net>
Source record: 37563

Jim Rayburn wrote:
> I have a TS-830 that when in cw and you transmit the freq goes up by
> 00.000.8 every time. It does not do it in tune or USB/LSB. I was wondering
> if someone else had this problem and a quick fix.
> Thanks
> Jim
> KC4BQK
>
>

The TS830 has a partially synthesized hfo chain and a frequency counter
display.
Rigs that are totally systhesized (pll/dds) show the desired air
frequency while rigs
of the TS830 generation count the result (which changes based on the
carrier osc and
cw offset). It's not that it's less confusing not to show the offset in
the new rigs, it's
that they generate the offset AFTER the air frequency is selected, while
the TS830
HAS to show the result.

1364. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 01:22:45 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046049847.613109@auth2.dns.griffin.net.uk>
Source record: 37569

thanks for idea,,have built many 4cx amps...but i need no tune broadband,
which kind of rules out tubes,
simon

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0302231217.35553fb6@posting.google.com...
> "zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1045879264.329522@auth2.dns.griffin.net.uk>...
>
> > looking for construction details/even a kit, but would rather build own,
for
>
> > a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably
28/50v
>
> > mosfet design.
>
> > any ideas? must be someone out there (in USA?) with info..
>
> > thanks.
>
> > simon g0zen
>
>
> Try the VHF/UHF DX Book by G3SEK. A pair of 4CX250s
> isn't exactly a pair of MOSFETs, but would probably be
> a lot easier to get right...
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1365. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 01:23:27 UTC
From: Justice Gustine <justicegustine@yahoo.com>
Message-ID: <kpsi5v05gsfnriiaqjea3ka50urjrjdjbc@4ax.com>
Source record: 37568
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Adam Adkins <no@way.com> wrote:

>
>
> I discovered very quickly how a kink in the cable is a disaster.
>Thirty feet from the end of a 200 foot run, the cable kinked and the
>outer metal jacket ruptured. Bleah. How disappointing.
>Can anyone tell me good, cheap and durable ways to splice the
>cable?

There are repair kits that techs use to patch open shields. Some
professional version of foil, contact cement & hose clamps. I don't
have any, but I'll check for any sources I know..

1366. Re: 300/600w vhf amp construction details wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 01:24:01 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046122915.927447@auth2.dns.griffin.net.uk>
Source record: 37594

thanks for idea,,have built many 4cx amps...but i need no tune broadband,
which kind of rules out tubes,
simon

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0302231217.35553fb6@posting.google.com...
> "zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1045879264.329522@auth2.dns.griffin.net.uk>...
>
> > looking for construction details/even a kit, but would rather build own,
for
>
> > a 300w/600w (need 600w so 2 300w amps) broadband vhf amp preferably
28/50v
>
> > mosfet design.
>
> > any ideas? must be someone out there (in USA?) with info..
>
> > thanks.
>
> > simon g0zen
>
>
> Try the VHF/UHF DX Book by G3SEK. A pair of 4CX250s
> isn't exactly a pair of MOSFETs, but would probably be
> a lot easier to get right...
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1367. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 01:48:23 UTC
From: jcplpsm@aol.communicate
Message-ID: <20030223204823.17955.00000041@mb-cp.aol.com>
Source record: 37570

>There are repair kits that techs use to patch open shields. Some
>professional version of foil, contact cement & hose clamps. I don't
>have any, but I'll check for any sources I know..

You will never find a tech that is worth anything using a splice made from foil and clamps. There are splices manufactured specifically for this purpose. You might try approaching your local cable company to see if you could buy one, but you will also need a coring tool and prep tool to properly install it.

Scott M

1368. ATV Transmitter project??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 02:46:54 UTC
From: Troy Thoele <electronicsnospam@txcyber.com>
Message-ID: <b3bpob$9l6$1@news.txcyber.com>
Source record: 37567

Greetings -

I have been researching ATV transmitters, and the only information I can find is on a commercial kit.

Does anybody have a link for an inexpensive ATV transmitter project? Oh, this would be for the 70cm band.

Thanks,
Troy Thoele
KD5UAC

(take the nospam out of my email address if you want to email me)

1369. FS - T2 Transmitter PC Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 03:22:31 UTC
From: GLEN JENKINS <wb4ktf@pipeline.com>
Message-ID: <b3c35g$5vt$1@slb1.atl.mindspring.net>
Source record: 37571

I have a new, unused PC Board for the T2 Transmitter from Applied Radio Science. For details on the project see QSTs of January, April and May 1993.. Board Labels: 1993, R. Campbell, CEC1-0, 93-02. First $12.50 get the board (includes shipping within USA). Please email to me at wb4ktf@pipeline.com. 7s, Glen, WB4KTF, Houston TX.

1370. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 04:41:33 UTC
From: Justice Gustine <justicegustine@yahoo.com>
Message-ID: <lv7j5v48o6etaa7s30mhe1tlif140qmbqf@4ax.com>
Source record: 37572

Was not talking about a whole cut, dress, core & splice. There's some kind of patch kit used by service techs to patch a cracked shield until a splice was installed (or the whole span was replaced). Was a fix for CLI. Some of these temporary fixes are still up after several years keeping the shield intact.

I don't stock them anymore, but bet I could find some in a few tech vans.

JG - (amateur at radio, professional in cable)

jcplpsm@aol.communicate (SAM) wrote:

>>There are repair kits that techs use to patch open shields. Some
>>professional version of foil, contact cement & hose clamps. I don't
>>have any, but I'll check for any sources I know..
>
>You will never find a tech that is worth anything using a splice made from foil
>and clamps. There are splices manufactured specifically for this purpose. You
>might try approaching your local cable company to see if you could buy one, but
>you will also need a coring tool and prep tool to properly install it.
>
>Scott M

1371. Re: transistor spec help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 04:42:38 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0302232042.2c904a4e@posting.google.com>
Source record: 37573

Simon,

SD1019 is 28V, 80W, 9dB gain, 108-156MHz, Bipolar

No luck with any of the others.

Mark, KE6LVK / G8JVX (ex)

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1045962921.801214@auth2.dns.griffin.net.uk>...
> can anyone help in supplying the spec on the following rf power
> transistors??
>
> CD4442
> SD1019-5
> PT8783
> PT8726
> motorola 4021 made by mot. for ? in house no??
>
> thanks simon g0zen

1372. what's a good replacement for a MRF240A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 04:42:38 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3E59A2BE.1090205@hotmail.com>
Source record: 37574

I have an RS HTX-212 with a dead final, and the correct final (MRF240A) has been discontinued. I can still order one, but it would cost $$$. Is there a good (inexpensive) alternative to this transistor? It has to have approx 45-60W output, NPN, and be able to operate in the 2 meter band. Thanks.

73,
Alex
VE3LEG

1373. Re: motorola rf transistor identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 04:48:18 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0302232048.273d9128@posting.google.com>
Source record: 37575

Simon,

SD1407 is only spec'ed to 30MHz at 15dB gain.

However, I believe that you take a 4dB per octave hit on gain, so if
you ran it at 90MHz :) you might still get around 7dB gain.

Mark.

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1045790484.53334@auth2.dns.griffin.net.uk>...
> its marked up 4021..i expect uhf about 40w???
> 0.5inch pill package.date code 1988
> any ideas on spec or equivalent??
> thanks
> simon g0zen
>
> also sd1407does anyone have info on running these at vhf class c..ie max
> power out and gain..
>
> thanks

1374. Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 04:53:42 UTC
From: qutec@excite.com
Message-ID: <d2e33a2f.0302232053.3c5959aa@posting.google.com>
Source record: 37576
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Hello all,
I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden 9913 cable and 30 feet of mast(radioshack)to start listening to the world.

I would like to build my own preamp with several sets of filters (10-20)to knock out the high power RF (radio,pagers, ect.) I am thinking of using a minicircuits ERA-3 monolithic amplifier (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a better amp, I'll use it.

My main questions are this:

What frequency bands should I target with the filter sets?
The FCC alocation chart I have shows what is licensed to each band, but does not mention alotted power.

What software would help me quickly find the component values for the filters?
The simpler the better!

Would I gain anything from cascading ERA-3s? Could I set them up for variable gain? or would I have to switch in attenuators to prevent front end overload?

What type of remote filter switching scheme should I use? I want to be able to control the preamp from inside the house. I know that relays tend to be noisy, so those are out. Transitters?

Im sure an RF guru could help me out here.

Thanks for reading,

Jason

1375. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 06:20:55 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <bRi6a.48554$rq4.4016680@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37577

Also, the Phillips TDA1072 or the TDA1572 will do the trick. You will need external components for the oscillator, ceramic filters, etc. This is a high performance AM radio on a chip. The 1572 is used in both the Linn Kudos tuner
(LW/MW section), and in the AOR7030 as the 2nd I.F. subsystem. It is a relatively easy chip to implement, although not as simple as the two aforementioned examples.

Pete

Mark <markg0usl@hotmail.com> wrote in message
news:9rb6a.4576$Ax1.1654@news-binary.blueyonder.co.uk...
>
> "Aaron Staple" <astaple@stanford.edu> wrote in message
> news:Pine.GSO.4.44.0302230126460.20594-100000@elaine35.Stanford.EDU...
> > Hi,
> > I'm looking for a simple and cheap AM radio IC that will handle
> > tuning and demodulation. Basically, I'd just like to connect it to an
> > antenna in and an audio out and do tuning digitallly via another
> > input. I don't care much about sound quality. Does anyone have any
> > suggestions for an IC I could use?
> >
> > Thanks,
> > Aaron Staple
> >
> >
> ZN414 is what you are looking for it is an AM radio in a 8pin DIL package
>
> Best 73 de Mark G0USL
>
>

1376. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 08:52:29 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <p6ij5vo6sj5t66got5r69lad31200f59mm@4ax.com>
Source record: 37578
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

On 23 Feb 2003 20:53:42 -0800, qutec@excite.com (Jason) wrote:

>Hello all,
>I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
>(http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
>9913 cable and 30 feet of mast(radioshack)to start listening to the
>world.

That is a huge frequency range and no antenna is going to work well on that entire frequency range. It might be a good idea to split the frequency range into at least two bands, say 25-250 and 130-1300 MHz and use two separate antennas designed for those ranges.

> I would like to build my own preamp with several sets of filters
>(10-20)to knock out the high power RF (radio,pagers, ect.) I am
>thinking of using a minicircuits ERA-3 monolithic amplifier
>(http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
>better amp, I'll use it.

Those MMICs are cheap, why don't you build a complete preamplifier for each band. Filter switching is nasty at higher frequencies, especially when it must be remotely controlled. You could feed the outputs from the various preamplifiers through some combining filters to a single feed line and only switch the DC supply to the various preamplifiers.

When using multiple amplifiers is the tower, there is not much to gain from a single ultra-wide band antenna. Use multiple antennas designed for each frequency range of interest. Usually there is not much point of using preamplifiers below about 200 MHz, since the band noise is quite high and the cable losses are low.

Stripline filters are nice for the upper UHF frequencies, while at VHF, ordinary coils and capacitors or helical filters (e.g. Toko) are nice.

Those MMICs can be easily overloaded, so make sure that the strong signals from nearby FM or TV transmitters are filtered out prior to running the signal through the ERA amplifier.

>Would I gain anything from cascading ERA-3s? Could I set them up for
>variable gain? or would I have to switch in attenuators to prevent
>front end overload?

The antenna amplifier should only compensate for the feed line loss and mask the receiver noise, so a good rule of thumb is that 10 dB should be added to the cable loss to get the required preamplifier gain. Handheld scanners are very easily overloaded, so there is not much point of using too much gain, even if the input is filtered.

Paul

1377. Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 09:56:50 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <r5qj5voi5irhu8eg0c9qcbtudat0h6567v@4ax.com>
Source record: 37579

Hi,

All the GDOs I've seen seem to incorporate a different resistor into each plug-in coil so that when you change coils, you also change the resistance value associated with that coil. I've found it a worthwhile improvement to do away with these resistors and simply connect their socket connections to an externally adjustable variable resistor whose value is next preferred up from the highest value coil resistor. When in use, one simply adjusts this resistance for minimum stable oscillation - just above the point where the waveform collapses altogether. You will then get a *much* better dip. The incorporated fixed resistors aren't ideal for the task and cause a lack of sensitivity and often barely perceptible dips. This method results in a vast improvement and generally a full-scale dip.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1378. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 12:18:54 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Keo6a.247$um.68141@newsfep1-win.server.ntli.net>
Source record: 37581
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
==========
The question is : Do you really need a pre-amplifier ?
Not knowing the frequencies of the high power interfering radio sigs and
whether there are other nearby frequencies you would like to monitor , I
would suggest to initially consider a simple (multiple) quarter wave stub
arrangement , to suppress the most troublesome RF sources.....and
take it from there.

Frank gm0csz.kn6wh@ntlworld.com

1379. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 12:28:13 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Leo6a.248$um.68141@newsfep1-win.server.ntli.net>
Source record: 37580
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Without _any_ poly jacket, you need to worry about electrolysis and/or
> the PH of the soil. If it were me: I'd bury it in some black poly pipe.
> 'Twould be a feat to stuff in a looooooong run of it...
==========
Suggest you use flexible 'alkathene' (polyethylene) water pipe
In Europe (incl Britain) it is available in 20 , 32 mm diameter and larger
sizes
;colour is blue.
I use this pipe also for coax cable with copper braid and black sheathing ,
ie for underground 75 Ohms coax to a TV satellite dish as well as for RG
316 ,50 Ohms coax to a vertical HF antenna.
It is important that the pipe at the outdoors end is properly sealed to
prevent
water running into it.
Alternatively (that's what I have done) where pipe with coax come above
ground outdoors there is a half circle bend resulting in the pipe opening
pointing downwards ,hence rain water can not enter and the circular opening
between pipe and coax cable is left open for breathing.
I realise the latter method might not be suitable for hardline coax because
of the bend's radius.

Frank gm0csz.kn6wh@ntlworld.com

1380. Re: Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 13:11:12 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <bJGcnUYhDsMQh8ejXTWc2Q@comcast.com>
Source record: 37582

What you are doing is raising the "Q" of the coil. Nothing wrong with this except when you try to dip another high-Q circuit -- you might miss the resonant point.
"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message news:r5qj5voi5irhu8eg0c9qcbtudat0h6567v@4ax.com...
>
> Hi,
>
> All the GDOs I've seen seem to incorporate a different resistor into
> each plug-in coil so that when you change coils, you also change the
> resistance value associated with that coil. I've found it a worthwhile
> improvement to do away with these resistors and simply connect their
> socket connections to an externally adjustable variable resistor whose
> value is next preferred up from the highest value coil resistor. When
> in use, one simply adjusts this resistance for minimum stable
> oscillation - just above the point where the waveform collapses
> altogether. You will then get a *much* better dip. The incorporated
> fixed resistors aren't ideal for the task and cause a lack of
> sensitivity and often barely perceptible dips. This method results in
> a vast improvement and generally a full-scale dip.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

1381. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 13:59:43 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5A24EF.5FA8FE01@gte.net>
Source record: 37583
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Jason wrote:

> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.
>
> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
>
> My main questions are this:
>
> What frequency bands should I target with the filter sets?
> The FCC alocation chart I have shows what is licensed to each band,
> but does not mention alotted power.
>
> What software would help me quickly find the component values for the
> filters?
> The simpler the better!
>

I can tell you from personal experience (we make thoudsands of them) that targeting, say, the 152-153 pagers and not also eliminating or radically reducing signals within many MHZ either side is far from a trivial problem.
The IP3 levels of the MAR and ERA devices make them unsuitable (IMHO) for preamp use.
In almost every case, wideband preamps create problems far worse than they solve. Put a good quality feedline on your antenna and forget the preamps.

Dale W4OP
for PAR Electronics, Inc.

1382. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 15:21:33 UTC
From: Piotr Balcerzak <bpiotrek@yahoo.com>
Message-ID: <dJq6a.10875$cB3.60848@nnrp1.uunet.ca>
Source record: 37584
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Hi,

"Jason" <qutec@excite.com> wrote in message
news:d2e33a2f.0302232053.3c5959aa@posting.google.com...
>
> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
>
> My main questions are this:
>
> What frequency bands should I target with the filter sets?

You would probably want to block everything below 25 MHz
(scanner is not real HF radio and overloads easily), 87-108 MHz
(FM is very strong and not interesting), 152-153 MHz (unless
you want to decode pagers), 108-116 MHz (AIR beacons)
and maybe 116-136 (unless you want to listen to airplanes).

Start with high-pass 25 MHz filter and FM 87-108 MHz notch.

>
> Would I gain anything from cascading ERA-3s? Could I set them up for
> variable gain? or would I have to switch in attenuators to prevent
> front end overload?

R2 is extremely sensitive. Amplifier will make things much worse
- especially with additional outdoor antenna. Forget the amp and
prepare few attenuators: 6/12/18 dB. You will probably find them
much more usefull.

Good luck!
Piotr

1383. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 15:29:40 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <ETq6a.4565$io.184446@iad-read.news.verio.net>
Source record: 37585
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

In rec.radio.shortwave Jason <qutec@excite.com> wrote:
> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.

I hate to say this, but hooking a handheld scanner to an outdoor antenna and then addind a preamp is a BAD idea.

Handheld scanners have poor intermod immunity for several reasons. They are designed to minimize current draw (which drains the battery). That precludes the use of high IP3 mixers. They usually do not provide pre-selector filters either due to space constraints. Basically, they are meant to be used as handheld radios with a small rubber duck antenna.

A good desktop scanner like the Radio Shack PRO-2004 series incorporates a series of bandpass filters (about 10 as I recall) in the front end to reject unwanted frequencies. The appropriate filter is selected as the radio scans through each programmed frequency.

Art Harris N2AH

1384. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 17:03:04 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <21kk5vk87uo667qdfad8om4svllh6vb2cs@4ax.com>
Source record: 37586

Jim Weir <jim@rst-engr.com>
shared these priceless pearls of wisdom:

->The referenced 3-pin AM receivers are the basis of a whole bunch of "hobby
AM/SW
->receiver" plans and kits.
->
->They seem to be widely available from distributors in both the UK and OZ, but
I
->have NOT been able to find the current manufacturer for any of them. Here is
->what I have found so far:
->
->ZN414 -- probably obsolete and out of production
->
->ZN416 -- Ferranti used to make them, but it seems that Ferranti was bought and
a
->labyrinthine search failed to turn up the subsequent owner and manufacturer of
->the part.
->
->MK484 -- hobby sites only turned up on a couple of hours web search.
->
->Now I admit that I'm not the best webcrawler in the world. If anybody has a
->lead on the MANUFACTURER (or at least an official data sheet) of this little
->device, I'd sure appreciate it.
->
->Jim

1385. WTB VIKING RANGER I

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 17:06:36 UTC
From: Don <don-com1@attbi.com>
Message-ID: <wis6a.225044$tq4.5341@sccrnsc01>
Source record: 37587

WANTED:

VIKING RANGER I. IN VERY GOOD CONDITION.

Tnx for the read,

Don W6PJJ
Sacramento, CA

1386. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 18:19:57 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5a6219$0$137$edfadb0f@dtext02.news.tele.dk>
Source record: 37588

Hello Jim

> ->Now I admit that I'm not the best webcrawler in the world. If anybody has a
> ->lead on the MANUFACTURER (or at least an official data sheet) of this little
> ->device, I'd sure appreciate it.

You will find datasheet to all 3 of them here

http://hem.passagen.se/sm0vpo/comms/list.htm

Regards Max

1387. radiodsp : an audio processing programm for EVM56002

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 18:34:29 UTC
From: F4DWV <f4dwv@radioamateur.org>
Message-ID: <newscache$kxstah$n7f$1@news.tiscali.fr>
Source record: 37589
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.digital.misc

Hello,
I just put on the web, my last program for EVM56002 board :
http://thierry.leconte.chez.tiscali.fr/radiodsp01.zip

radiodsp is a program for the EVM56002 motorala evaluation board
that implements classical DSP audio filters to improve ham radio reception.

Its features :
- an AGC
- a band pass filter with 4 selectable bandwidths (100Hz, 200Hz , 1500Hz
and 1800Hz)
- a auto notcher
- a denoiser

For more information see :
http://thierry.leconte.chez.tiscali.fr/radiodsp.html

try and enjoy
F4DWV

1388. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 20:02:22 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <iTu6a.12128$FF4.632859@newsb.telia.net>
Source record: 37590

A K1 is a good choice for your first kit building experience.With sunspots going down, a 40 plus 20 m combination is probably the best. If you construct an OCF/ also called Windom/ dipole, cut for 40, you can use it also on both bands with coax feed, without a tuner. Or cut two dipoles, one for each of the two bands.

If you want to use end fed wires or a dipole with ladder line feed for multiband use, you will need a tuner (and a balun for the cf dipole).

Alternatively, buy the MP1 antenna from Elecraft, which you can adjust for proper matching.

Good luck!

73's de Per SM0WRA

"Ale55andro"
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it> wrote in message news:fvne5vg1bt4qoj7cs21pcucajolh5koolf@4ax.com...
> On Sat, 22 Feb 2003 10:49:45 GMT, JS <wd1v@amsat.org> wrote:
>
> >http://www.elecraft.com
> I would be interested in K1-2
> Which two bands do you suggest to start?
> The ATU is a must-have?
> Thanks again
> Ale
>

1389. WTB homebrew Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 20:16:06 UTC
From: enigma_y_2000@yahoo.com
Message-ID: <3e5a7d28.3263292@news.usfamily.net>
Source record: 37591

Hi,

I'm looking for a homebrew linear, working or not, that I can use on 160 Meters. Something with 600W or more out. Or perhaps a commercial amp that you are willing to sell cheaply.

Let me know what you have!

Thanks,

Bob

1390. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 20:42:22 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <MdH6a.102$yC2.52739@newsfep1-win.server.ntli.net>
Source record: 37509

> ->MK484 -- hobby sites only turned up on a couple of hours web search.
> ->
> ->Now I admit that I'm not the best webcrawler in the world. If anybody
has a
> ->lead on the MANUFACTURER (or at least an official data sheet) of this
little
> ->device, I'd sure appreciate it.
==========
Indeed a hobby device with info to be found at www.epemag.com Everyday
Practical Electronics , March 2002 issue
and also a British supplier : Rapid Electronics with a complete circuit
diagramme on their web site www.rapidelectronics.co.uk

The spec sheet can be found at : www.kitsrus.com/projects/mk484.pdf

Frank gm0csz.kn6wh@ntlworld.com

1391. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 21:04:44 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <m42l5vsgs19nbteu11an1j8j5d6kd9atl9@4ax.com>
Source record: 37593

Thanks, Max, but...

The data sheets do NOT have the manufacturer's name on them. The one simply says it is a Japanese copy of the 414, and the 414 says it comes from "RS", whoever that is.

I need current manufacturing data. Thanks for your efforts.

Jim

->You will find datasheet to all 3 of them here
->
->http://hem.passagen.se/sm0vpo/comms/list.htm
->
->Regards Max
->

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1392. FA: ST, loctal, 12AX7A tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 21:21:27 UTC
From: ethan <NOarficusSPAHM@yahoo.com>
Message-ID: <r1w6a.226200$tq4.5590@sccrnsc01>
Source record: 37592
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Lot of NOS and used Loctal tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160956789

NOS and used ST shouldered tubes
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160984300

5 NOS RCA 12AX7A
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=10171&item=2510950585

1393. Re: Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 21:39:02 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <dffk5vkt4q65f7dvirtu17c4f9492h9toe@4ax.com>
Source record: 37596

On Mon, 24 Feb 2003 08:11:12 -0500, "john walton"
<jdwalton@comcast.net> opined thusly:

>What you are doing is raising the "Q" of the coil. Nothing wrong with this
>except when you try to dip another high-Q circuit -- you might miss the
>resonant point.

I don't think that's what's happening, although I may well be wrong.
SFAIK, I'm simply loading down the oscillator's output until it's on
the verge of collapse, whereupon, the slightest extra load (in this
case from the tuned circuit under test) will cause it to show a sharp
dip at resonance. It's kind of like raising the GDO's unloaded output
impedance to the maximum possible before each test.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1394. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 21:44:07 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5a91f4$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 37595

Hello Jim

> The data sheets do NOT have the manufacturer's name on them. The one
simply
> says it is a Japanese copy of the 414, and the 414 says it comes from
"RS",
> whoever that is.

RS stands for RC Components, a very well known distributor of electronic
components
in Europa. Try visit http://www.rs-components.com/

I will try to dig up the manufactures.

Regads Max

1395. Re: Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 22:30:59 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5l796gijori19@corp.supernews.com>
Source record: 37497

My Kenwood DM-81 and Heathkit HD-1250 don't have resistors in the coils and have sensitivity controls. I haven't used my Millens (tube and transistor) in ages and can't recall if they had resistors. For convenience I like the Kenwood. It also has a probe that capacitive couple so you can check coils that can be reached and has sockets to check xtals!
73
hank wd5jfr

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message news:r5qj5voi5irhu8eg0c9qcbtudat0h6567v@4ax.com...
>
> Hi,
>
> All the GDOs I've seen seem to incorporate a different resistor into
> each plug-in coil so that when you change coils, you also change the
> resistance value associated with that coil. I've found it a worthwhile
> improvement to do away with these resistors and simply connect their
> socket connections to an externally adjustable variable resistor whose
> value is next preferred up from the highest value coil resistor. When
> in use, one simply adjusts this resistance for minimum stable
> oscillation - just above the point where the waveform collapses
> altogether. You will then get a *much* better dip. The incorporated
> fixed resistors aren't ideal for the task and cause a lack of
> sensitivity and often barely perceptible dips. This method results in
> a vast improvement and generally a full-scale dip.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

1396. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-24 23:00:24 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <id4l5v0g2urmdl47ffcb8c5flehp3n79kn@4ax.com>
Source record: 37498

On Mon, 24 Feb 2003 13:04:44 -0800, Jim Weir <jim@rst-engr.com> opined
thusly:

>Thanks, Max, but...
>
>The data sheets do NOT have the manufacturer's name on them. The one simply
>says it is a Japanese copy of the 414, and the 414 says it comes from "RS",
>whoever that is.
>
>I need current manufacturing data. Thanks for your efforts.

I have a data sheet for the 484 plus a suggested circuit that it could
work in. I also have one device as well. Probably never get around to
using it. Pity You're not in England as I could mail it to you for
nothing. But if you want a scan of the data sheet, I can e-mail it to
you.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1397. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 00:21:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <cldl5v8tfkuo9akp3pgf9kvdpqm9neh7tr@4ax.com>
Source record: 37499

Maplin has them, too, and darned few Maplins on this side of the pond. Anything
you can do to point to the real source would be most appreciated.

Jim

"Max" <Max_Jens@post9.tele.dk>
shared these priceless pearls of wisdom:

->
->RS stands for RC Components, a very well known distributor of electronic
->components
->in Europa. Try visit http://www.rs-components.com/
->
->I will try to dig up the manufactures.

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1398. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 00:22:53 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <rndl5v0dkkr7dlo5iifaghgi5dqar99ui2@4ax.com>
Source record: 37500

Thanks, Paul, I've got about half a dozen data sheets of varying opinions on the device and as yet (until I can find out how long the pipeline is expected to be open and other "manufacturer" questions) I don't need a working part.

Jim

Paul Burridge <redscar@waitrose.notthisbit.com>
shared these priceless pearls of wisdom:

->I have a data sheet for the 484 plus a suggested circuit that it could
->work in. I also have one device as well. Probably never get around to
->using it. Pity You're not in England as I could mail it to you for
->nothing. But if you want a scan of the data sheet, I can e-mail it to
->you.

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1399. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 00:45:21 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5abc6e$0$140$edfadb0f@dtext02.news.tele.dk>
Source record: 37501

Hello Jim

> Maplin has them, too, and darned few Maplins on this side of the pond.
Anything
> you can do to point to the real source would be most appreciated.

Spend a few hours digging on the net, but all I find is people like you
seaching
for the manufactur, sorry.

Best regards Max

1400. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 00:59:20 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <ldz6a.49444$rq4.4101555@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37502

The ERA series are very good. The only thing I would say is that they don't tolerate overdrive well at all. Follow the manufacturer's data sheet and stay well below the maximum drive to avoid "popping" these devices...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

> > I would like to build my own preamp with several sets of filters
> > (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> > thinking of using a minicircuits ERA-3 monolithic amplifier
> > (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> > better amp, I'll use it.

1401. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 01:20:37 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0302241720.69f3eb3f@posting.google.com>
Source record: 37503
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

qutec@excite.com (Jason) wrote in message
news:<d2e33a2f.0302232053.3c5959aa@posting.google.com>...
> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.
>
> I would like to build my own preamp with several sets of filters

Jason,
I have two radio shack scanners, an RS-2045 (a base) and RS-64 (a handheld).
The 2045 gets a lot more use at home because it allows attenuation to be individually selected for each channel. Adding a preamp will probably just overload your scanner, especially if you live anywhere but out in the country.
But a cheap test might be to put a TV preamp inline with your discone. The discone doesn't have gain to speak of, and you will lose a little of what you receive on your coax, so something like 10 db of gain might not bother you. You will probably want to switch in the FM filter if it has one. Of course using this set up you won't be able to scan all bands, but it will give you a feeling for how much help a preamp can be in your situation.
If you locate something distant you really want to hear, you might investigate a second antenna such as a log periodic, it has gain, bandwidth and is directional.

Good luck, Jim

1402. Re: Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 02:20:04 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5AD275.201369F1@gte.net>
Source record: 37504

Paul Burridge wrote:

> Hi,
>
> All the GDOs I've seen seem to incorporate a different resistor into
> each plug-in coil so that when you change coils, you also change the
> resistance value associated with that coil. I've found it a worthwhile
> improvement to do away with these resistors and simply connect their
> socket connections to an externally adjustable variable resistor whose
> value is next preferred up from the highest value coil resistor. When
> in use, one simply adjusts this resistance for minimum stable
> oscillation - just above the point where the waveform collapses
> altogether. You will then get a *much* better dip. The incorporated
> fixed resistors aren't ideal for the task and cause a lack of
> sensitivity and often barely perceptible dips. This method results in
> a vast improvement and generally a full-scale dip.
> --

Pick up a Measurements #59 (or the newere 159). These meters make the
Heath, Millen etc look like toys. You can get a huge dip on 1 meter rod by
simply loosely coupling to the center- try that with the others.
Dale W4OP

1403. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 02:20:44 UTC
From: n2uhc@yahoo.com
Message-ID: <3442abbf.0302241820.4db8be7d@posting.google.com>
Source record: 37505

Ale55andro <AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.it> wrote in message news:<1d2h5vogm71ulafaoo6h4ospgtulqfbmke@4ax.com>...

> >You might also try www.smallwonderlabs.com for stuff a little more
> >moderately priced.
>
> Nice...very low price.
> Same perfomances like K1 (of course, according to you) ?
> Thanks again
> Ale

The Small Wonder kits are excellent kits. I've built the SW20+ and SW40+. However, they are not on the same par as the K1. They are a bit more simple, which I'd suggest as a starter QRP kit. I will also say that they are easy to build & align once built. They perform quite well but lack some of the bells & whistles found on the K1 & K2. But, as I said, the simpler design might be a better way to get started in QRP.

Tom N2UHC
http://www.geocities.com/n2uhc

1404. Re: Newbie: QRP kit where buy online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 02:27:53 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v5ll6reapnke69@corp.supernews.com>
Source record: 37506

Per

This is exactly what Ale needs, someone from Europe who needs to put up with the conditions there! And I think you are saying that you've had a reasonable experience on 40 with the K1? I, too, like the 40/20 combination, but I don't have to put up with the interference on 40 that you do! I assumed that a 602 wasn't the ticket in Europe on 40, but the K1 is a very good implementation, so hardly typical.

..

"Per Enocson" <per.enocson@telia.com> wrote in message news:iTu6a.12128$FF4.632859@newsb.telia.net...
> A K1 is a good choice for your first kit building experience.With sunspots
> going down, a 40 plus 20 m combination is probably the best. If you
> construct an OCF/ also called Windom/ dipole, cut for 40, you can use it
> also on both bands with coax feed, without a tuner. Or cut two dipoles,
one
> for each of the two bands.
>
> If you want to use end fed wires or a dipole with ladder line feed for
> multiband use, you will need a tuner (and a balun for the cf dipole).
>
> Alternatively, buy the MP1 antenna from Elecraft, which you can adjust for
> proper matching.
>
> Good luck!
>
> 73's de Per SM0WRA
>
>
> "Ale55andro"
>
<AleXander.NoSpam.DontWriteToMe_SpammametaYourSelf_Now_Against_A_Wall@tele2.
> it> wrote in message news:fvne5vg1bt4qoj7cs21pcucajolh5koolf@4ax.com...
> > On Sat, 22 Feb 2003 10:49:45 GMT, JS <wd1v@amsat.org> wrote:
> >
> > >http://www.elecraft.com
> > I would be interested in K1-2
> > Which two bands do you suggest to start?
> > The ATU is a must-have?
> > Thanks again
> > Ale
> >
>

>

1405. Re: MK484, ZN416, ZN414

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 03:32:45 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b3eo4t$67m$1@freenet9.carleton.ca>
Source record: 37507

Jim Weir (jim@rst-engr.com) writes:
> Thanks, Paul, I've got about half a dozen data sheets of varying opinions on the
> device and as yet (until I can find out how long the pipeline is expected to be
> open and other "manufacturer" questions) I don't need a working part.
>
> Jim
>
I'm surprised these things are readily available. The 414 is at least
thirty years old, and while it is a neat little IC, I can't help but
think there was never much commercial application. You rarely come across
a commercially made TRF radio. So either we are just seeing the slow
sell-off of an over-optimistic first run of the IC, or there is some
odd use for them. And since there were two followups, it's an even
greater puzzle.

This site, from a websearch, http://www.thebest.net/wuggy/comments.htm
says that a place named "Kitsrus" says the MK484 is out of production,
but there are 500,000 in the pipeline. It mentions also that the other
two are out of production, too. But not a word about the mythical
manufacturer.

I bought one of those $1.99 FM radios, the kind with a scan and a
reset button, when they dropped to two dollars. I was simply curious
about what was inside. I thought it might be the Phillips TDA7000,
which also gets lost of mention in hobby circuits but I could never
figure out the commercial market. It wasn't a match. But Phillips
had some for this type of radio (the circuitry for the tuning
included) and the circuitry I traced matched another Phillips IC,
I think it was the TDA7088. But this IC looked like either a knockoff,
or second source from a company that is cutting costs.

So whoever makes the MK484, I suspect it is some obscure cut-rate
company that is selling to radio manufacturers who want the absolute
lowest cost.

If I saw $1.99 AM radios, I'd immediately buy one, with the suspicion
that it had an MK484 or something similar in it.

Micahel VE2BVW

1406. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 07:26:15 UTC
From: marcje01@yahoo.com
Message-ID: <ca10ea14.0302242326.5ecea056@posting.google.com>
Source record: 37508
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

"Piotr Balcerzak" <bpiotrek@yahoo.com> wrote in message
news:<dJq6a.10875$cB3.60848@nnrp1.uunet.ca>...
> Hi,
>
<cut article>

>
> You would probably want to block everything below 25 MHz
> (scanner is not real HF radio and overloads easily), 87-108 MHz
> (FM is very strong and not interesting), 152-153 MHz (unless
> you want to decode pagers), 108-116 MHz (AIR beacons)
> and maybe 116-136 (unless you want to listen to airplanes).
>
> Start with high-pass 25 MHz filter and FM 87-108 MHz notch.
>

Hi Piotr,

I am planning to do exactly the same like you describe above, i.e.
build a High pass filter that filters out anything < 30 MHz and
and in series with that a band reject filter 88-108 MHz (in future
depending on the need maybe even some more filters).

Do you have any experience with this?
I mean: Is it possible to cascade the filters just like that?
At least they should have a 'load' of 50 Ohms at the input and
output. If I would have one filter, it's no problem:
Antenna is 50 Ohm (input) and receiver is 50 Ohms (output).

But what if I want to cascade the filters? I reckon that I need
to put a 50 Ohms resitir in series with the separate filters...
Do you have any plans or schematics?

Cheers,
/Marc

1407. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 14:26:17 UTC
From: Piotr Balcerzak <bpiotrek@yahoo.com>
Message-ID: <m%K6a.11304$cB3.66473@nnrp1.uunet.ca>
Source record: 37510
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

"Marc" <marcje01@yahoo.com> wrote in message
news:ca10ea14.0302242326.5ecea056@posting.google.com...
> "Piotr Balcerzak" <bpiotrek@yahoo.com> wrote in message
news:<dJq6a.10875$cB3.60848@nnrp1.uunet.ca>...
> > Hi,
> >
> <cut article>
>
> >
> > You would probably want to block everything below 25 MHz
> > (scanner is not real HF radio and overloads easily), 87-108 MHz
> > (FM is very strong and not interesting), 152-153 MHz (unless
> > you want to decode pagers), 108-116 MHz (AIR beacons)
> > and maybe 116-136 (unless you want to listen to airplanes).
> >
> > Start with high-pass 25 MHz filter and FM 87-108 MHz notch.
> >
>
> Hi Piotr,
>
> I am planning to do exactly the same like you describe above, i.e.
> build a High pass filter that filters out anything < 30 MHz and
> and in series with that a band reject filter 88-108 MHz (in future
> depending on the need maybe even some more filters).
>
> Do you have any experience with this?
> I mean: Is it possible to cascade the filters just like that?
> At least they should have a 'load' of 50 Ohms at the input and
> output. If I would have one filter, it's no problem:
> Antenna is 50 Ohm (input) and receiver is 50 Ohms (output).
>
> But what if I want to cascade the filters? I reckon that I need
> to put a 50 Ohms resitir in series with the separate filters...
> Do you have any plans or schematics?
>
> Cheers,
> /Marc

Hi Marc,

I built high-pass 25 MHz filter because I had problems
with MVT9000 in low-VHF band (intermodulation).

After adding this filter between outdoor discone and
the scanner, the problems were gone.

You can find my design on:
http://www.geocities.com/bpiotrek/hpf25_e.html

I haven't try FM notch yet because I want to try building
my own circuit before spending money at store (building
circuits is a part of the hobby for me).

As for cascading the filters: it is possible but the resulting
characteristics will be a bit different than simple superposition
of the characteristics of both filters. I don't know how much
it could affect receiving.

I think it is very good idea to separate both filters with small
attenuator. The primary purpose of the device here is not
attenuating the signal but 'terminating' both filters so they can
work 'normally' (similar approach is very often used, for example,
in antenna amplifiers to suppress the results of variable load
impedance). Simple 3...6 dB attenuator in 'pi' or 'T' configuration
should do the job (50 ohm resistor put in series is not a good
solution because both filters should 'see' 50 ohms and not 50+50).

Cheers,
Piotr

1408. OHR 20 /40 QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 14:45:58 UTC
From: zoran <zkorolje@inet.hr>
Message-ID: <b3fvjc$32p$1@sunce.iskon.hr>
Source record: 37511

Hi ,HAM-s
I have original OHR 20 /40 QRP but I m lose my manuals.
Please ,good persons if anyone have this manuals copy or...
some web site for downloads.
I have litle problem with rit control
TNX

73 DE 9A5AZK

1409. Re: ATV Transmitter project??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 15:10:22 UTC
From: Jim N2VX <nospam@nospam.com>
Message-ID: <kt0n5v8s51ip7bu2keabpklmkf6gakolqq@4ax.com>
Source record: 37512

On Sun, 23 Feb 2003 18:46:54 -0800, "Troy Thoele"
<electronicsnospam@txcyber.com> wrote:

>Greetings -
>
>I have been researching ATV transmitters, and the only information I can
>find is on a commercial kit.
>
>Does anybody have a link for an inexpensive ATV transmitter project? Oh,
>this would be for the 70cm band.
>
>Thanks,
>Troy Thoele
>KD5UAC
>
>(take the nospam out of my email address if you want to email me)

You can always cheat and use a RF modulator that works on
cable channels 59-60 and add an amp and low-pass filter. Don't
know how good that would work without trying it. I tried a variation
on that theme and it worked OK: a wireless VCR Rabbit (900 MHz
band) with a 12 watt amp.

Commercial ATV transmitters do more than you think. Most mess
with the sync pulse to give a better final signal (after being
amplified). Handling audio takes some work, too.

If you are really interested look around for ATV Quarterly magazine.
It always had decent construction projects and they used to have
an email reflector. Don't know their current status, it's been a
while.

73,
Jim
N2VX

1410. Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 17:31:49 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5ba851$0$145$edfadb0f@dtext02.news.tele.dk>
Source record: 37513

Dear All

On my way through the Internet I found some schematics over
a Communication Reciever probely made by KE9OA Pete
Gianakopolus.
Any comments on that Reciever ??
And does anybody know where to find more info ???

Regards from Denmark

Max

1411. Re: Improving the dip of a GDO

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 17:55:27 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E5BAE0E.7050307@ay.com.au>
Source record: 37514

I build mine as a bridge circuit with uA meter across the middle. It is bit of a pain to keep the needle roughly mid-scale throughout the coil frequency range as the oscillator current changes, but it offers good sensitivity if the pot and oscillator supply resistors are fairly small, and the meter movement sensitive.

Paul Burridge wrote:
> Hi,
>
> All the GDOs I've seen seem to incorporate a different resistor into
> each plug-in coil so that when you change coils, you also change the
> resistance value associated with that coil. I've found it a worthwhile
> improvement to do away with these resistors and simply connect their
> socket connections to an externally adjustable variable resistor whose
> value is next preferred up from the highest value coil resistor. When
> in use, one simply adjusts this resistance for minimum stable
> oscillation - just above the point where the waveform collapses
> altogether. You will then get a *much* better dip. The incorporated
> fixed resistors aren't ideal for the task and cause a lack of
> sensitivity and often barely perceptible dips. This method results in
> a vast improvement and generally a full-scale dip.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (28% of Full)

1412. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 19:09:49 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <33fn5vg41ag98gbf4qukprm2eeefqehvqe@4ax.com>
Source record: 37519

On Tue, 25 Feb 2003 20:15:04 +0100, Lasse <no_email@today.sri> opined
thusly:

>If no one can come up with a useful application of the machine, I'll
>junk it and collect all the SMB, VCXO, and crystal filters that are
>stuffed inside. BTW great 19 inch box excellent for stuffing a
>luggable amp or HF rig inside... but I hate to trash an instrument
>that someone might need!.

Is this a spectrum *analyser*? If so, what's the frequency coverage?
I was sick as a pig, having sold my last one thinking I'd never need
it again - two weeks later I was having to try to replace it! Typical.
:-(

--

"What is now proved was once only imagin'd"
- William Blake, 1793

1413. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 19:11:00 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5BBF61.6E6CA0BF@gte.net>
Source record: 37515

Max wrote:

> Dear All
>
> On my way through the Internet I found some schematics over
> a Communication Reciever probely made by KE9OA Pete
> Gianakopolus.
> Any comments on that Reciever ??
> And does anybody know where to find more info ???
>
> Regards from Denmark
>
> Max

You can view my version of Pete's RX at:
http://www.parelectronics.com/pics/old/Pg150.jpg

I am very satisfied with its performance. Still working w/ different AM sync detectors and ceramic resonators to fix the USB and LSB BFO injection frequencies.
Also added a Collins 2nd IF filter for better CW/SSB selectivity. Pete's major aim was an AM RX- and in that regard the Philipps 2nd IF/ full wave AM demod yields the best sounding AM of ANY RX I have owned- and that's a pile of 'em.

Dale W4OP
for PAR Electronics, Inc.

1414. Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 19:15:04 UTC
From: Lasse <no_email@today.sri>
Message-ID: <defn5vs799hlmkai9g81r0fjp5s3dsbmii@4ax.com>
Source record: 37516

While digging in my deep junkbox I came across this mint EZM spectrum monitor. Looks as if it never been put into any use at all, I am really curioius if there is a good use for it?

According to the date stamp on components it must have been assembled in 89 or 90! It is NOT Y2K compliant, as the clock refuses to go highter than 1999. It operates from both 220 VAC and 24 VDC, having a built-in CRT.

If no one can come up with a useful application of the machine, I'll junk it and collect all the SMB, VCXO, and crystal filters that are stuffed inside. BTW great 19 inch box excellent for stuffing a luggable amp or HF rig inside... but I hate to trash an instrument that someone might need!.

Pity I haven't got the ESH3 receiver ;-(

No I do not have the manual.....

/Lasse SM5GLC

1415. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 19:27:21 UTC
From: mikea@mikea.ath.cx
Message-ID: <b3gg2p$8oj$1@puck.litech.org>
Source record: 37517

Lasse <no_email@today.sri> wrote:
> While digging in my deep junkbox I came across this mint EZM spectrum
> monitor. Looks as if it never been put into any use at all, I am
> really curioius if there is a good use for it?

> According to the date stamp on components it must have been assembled
> in 89 or 90! It is NOT Y2K compliant, as the clock refuses to go
> highter than 1999. It operates from both 220 VAC and 24 VDC, having a
> built-in CRT.

> If no one can come up with a useful application of the machine, I'll
> junk it and collect all the SMB, VCXO, and crystal filters that are
> stuffed inside. BTW great 19 inch box excellent for stuffing a
> luggable amp or HF rig inside... but I hate to trash an instrument
> that someone might need!.

> Pity I haven't got the ESH3 receiver ;-(

> No I do not have the manual.....

Got pics you could mail to me? I might be interested if the
price were right and the device still works.

--
Mike Andrews
mikea@mikea.ath.cx
Tired old sysadmin since 1964

1416. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 19:34:13 UTC
From: Lasse <no_email@today.sri>
Message-ID: <e4hn5v0332ieiblv1lttr72m2ta28q7pkp@4ax.com>
Source record: 37518

Mike,
sure, I can go down in the cellar and shoot a few pix!

This is one heavy box.... I was not really trying to sell the stuff
just wanted to see if it could be used for something rather than
scrapped ;-)

/Lasse SM5GLC

Check your mail later this evening
On Tue, 25 Feb 2003 19:27:21 +0000 (UTC), mikea@mikea.ath.cx (Mike
Andrews) wrote:

>
>Got pics you could mail to me? I might be interested if the
>price were right and the device still works.

1417. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 20:21:13 UTC
From: Lasse <no_email@today.sri>
Message-ID: <osjn5vsahlk389jplffhdpr1g920j6vman@4ax.com>
Source record: 37520

Paul,
AFAIK this is an add-on to measurement receivers and will do a
spectrum dsiplay. Not sure of the data but think it will act as a 1
MHz spectrum analyzer.

It does have MS-Dos but I have no special?? keyboard to go. It will
accept a floppy-drive but it is apparently an option not intsalled.

/Lasse SM5GLC

On Tue, 25 Feb 2003 19:09:49 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Tue, 25 Feb 2003 20:15:04 +0100, Lasse <no_email@today.sri> opined
>thusly:
>
>>If no one can come up with a useful application of the machine, I'll
>>junk it and collect all the SMB, VCXO, and crystal filters that are
>>stuffed inside. BTW great 19 inch box excellent for stuffing a
>>luggable amp or HF rig inside... but I hate to trash an instrument
>>that someone might need!.
>
>Is this a spectrum *analyser*? If so, what's the frequency coverage?
>I was sick as a pig, having sold my last one thinking I'd never need
>it again - two weeks later I was having to try to replace it! Typical.
>:-(

1418. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 20:40:30 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <kjen5v8jo1pcicakken5jtrb3lngep91v4@4ax.com>
Source record: 37521
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 24 Feb 2003 12:28:13 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> Without _any_ poly jacket, you need to worry about electrolysis and/or
>> the PH of the soil. If it were me: I'd bury it in some black poly pipe.
>> 'Twould be a feat to stuff in a looooooong run of it...

Tain't all that bad. Just use a large enough pipe and don't forget to
get some "wire soap" which is available at most electrical supply
stores. The ugly looking yellow soap makes the cable slippery and
allows pulling far more through a pipe or conduit that seems possible.
You just slop the stuff on, don't use sparingly.
I had two 350 foot runs plus a smaller quasi air core cable and two
runs of 9913.

Then again, at one location where we had dry sandy soil I just buried
the stuff with no extra protection.

>================
>Suggest you use flexible 'alkathene' (polyethylene) water pipe
>In Europe (incl Britain) it is available in 20 , 32 mm diameter and larger
>sizes
>;colour is blue.

My favorite is either the larger sizes of plastic conduit (1/4 inch
wall for mechanical protection and sweep "L"s for corners.

I've also used 5 inch plastic sewer pipe with good results.

>I use this pipe also for coax cable with copper braid and black sheathing ,
>ie for underground 75 Ohms coax to a TV satellite dish as well as for RG

For my two C-band dishes I just bury the cable direct.

>316 ,50 Ohms coax to a vertical HF antenna.
>It is important that the pipe at the outdoors end is properly sealed to
>prevent
>water running into it.

Water was/is the least of my worries. I use a water trap/drain just
before the pipe goes through the basement wall.
The trap is a 45 degree fitting with a cap over the bottom. The cap
has a bunch of 1/8th inch holes drilled in it to allow the water to
drain. The 45 is on the bottom of the pipe and in the sandy backfill
for the basement.

>Alternatively (that's what I have done) where pipe with coax come above
>ground outdoors there is a half circle bend resulting in the pipe opening
>pointing downwards ,hence rain water can not enter and the circular opening
>between pipe and coax cable is left open for breathing.
You don't have problems with varmints, bees and bugs, do you? <:-))
I removed 14 Yellow Jacket nests from the one satellite dish alone
last summer. The things got into the vent for the kitchen range, under
the sewer pipe vent flange, in electrical boxes, In the eaves, in to
soffit, and under the siding near the peak of the roof on the south
end. That particular nest was so large it pulled the siding away from
the house and had to be renailed. I used 14 cans of Wasp and Hornet
killer. As I recall I removed over 40 nests...only got stung4 times.
Three by Yellow Jackest and one by a wasp.

I had a TV tower stacked in the back yard. They built nests in the
legs. The things even built nests in the vertical mast at the top of
my tower, making it more than a little difficult and hazardous to work
on the antennas.

I use a " 20 X 20 Hoffman box" at the end of the pipe.
http://www.rogerhalstead.com/cablebox.htm
The conduit fitting is mounted right on the bottom of the box. All
outside openings are *sealed* with the expanding insulating foam.

NOTE, I am no longer using the 3/4 inch hard line.

Cables come down the tower, form a loop and then enter the box through
a 8 inch long conduit stub. The Yellow Jackets went up the cables and
built a nest in the box., but due to the seal they couldn't get into
the house. Prior to sealing I even had mice crawl up the cables into
the box and then follow the 75 foot run of conduit into the house.

>I realise the latter method might not be suitable for hardline coax because
>of the bend's radius.

Use a Sweep L, or in the case of the flexible plastic pipe, just bend
the whole works over about a 1.5 foot radius. (half meter radius)
If the plastic pipe/tube is a relatively close fit it will help
prevent the aluminum jacket from collapsing. OTOH not much can be
done about the thin jacket on half inch hard line except a wide radius
bend and being very careful..

I'd still seal the outside end, but leave the inside end open. The
thing only needs one end open for breathing and I prefer it not breath
in high humidity and critters.

BTW, the Tower project and station are shown at
http://www.rogerhalstead.com/tower.htm . NOTE, this is a large page
with lots of photos and runs on the order of 2 to 3 megs so unless you
have a fast connection it will take forever to load.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Frank gm0csz.kn6wh@ntlworld.com
>
>
>
>

1419. FA: 10 ceramic FT-243 crystal sockets - never used

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 20:45:56 UTC
From: "Roy C. Pollitt" <pollitt1794@sunline.net>
Message-ID: <b3gmhd01fja@enews1.newsguy.com>
Source record: 37522

now on eBay:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3009173605&
rd=1

1420. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 22:35:54 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <6vqn5vkkho5lccg74md73glr3uoehqe6k7@4ax.com>
Source record: 37523

On Tue, 25 Feb 2003 21:21:13 +0100, Lasse <no_email@today.sri> opined
thusly:

>Paul,
>AFAIK this is an add-on to measurement receivers and will do a
>spectrum dsiplay. Not sure of the data but think it will act as a 1
>MHz spectrum analyzer.

Thanks for the clarification. No doubt you'll get some takers for it
if you stick it on e-bay.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1421. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-25 22:59:22 UTC
From: la8ak.xnd@online.no
Message-ID: <3e5a8a23.18393675@news.online.no>
Source record: 37524

On Mon, 24 Feb 2003 06:20:55 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>Also, the Phillips TDA1072 or the TDA1572 will do the trick. You will need
>external components for the oscillator, ceramic filters, etc. This is a
>high performance AM radio on a chip. The 1572 is used in both the Linn
>Kudos tuner
>(LW/MW section), and in the AOR7030 as the 2nd I.F. subsystem. It is a
>relatively easy chip to implement, although not as simple as the two
>aforementioned examples.
>
>Pete
>
Philips TEA6200 seems to be a very interesting device, unless you wish
the advices you already knew, see
http://www-us9.semiconductors.com/acrobat/datasheets/TEA6200_CNV_2.pdf
It is a quite unusual device, makes it possible to use high IF and
cover the two AM bands (LW/MW) 150-1600kHz with ease, this is mainly
because it has a high IP3 mixer

I've been looking into different applications where this device may be
an advantage

But I still miss synchronous AM-detector or simplified version of it
which might be a vaste improvement, then Philips TDA1576 or NE/SA604
would be possible choices. I've already put some possible demodulators
on my site, perhaps MC1351P and MC1357P still have some interest?

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

1422. Re: FM radio microphoney

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 00:18:47 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E5C08A5.C48CA67E@alma.demon.co.uk>
Source record: 37525

The last two posters win a prize ;-).

It may have been the coil/cap combo. I bought a box full of pre-wound coils on formers which had come out of some radio equipment. By chance one type of coil/cap resonated at around 50MHz, so was perfect for my 6m rx. The cap is a small 22pF ceramic.

I did tap all components but it still wasn't 100% clear which was to blame. A poor inoccent 22k ohm resistor was the first to be removed. I finally replaced the coil/cap combo and the problem appears to have gone away. There's still plenty of other problems with the rx though!

thanks for your suggestions...

--Gary

1423. teflon coax source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 01:13:11 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046223219.32250@auth2.dns.griffin.net.uk>
Source record: 37526

does anyone know of a supplier for 2.3mm and 3,3mm outside dia teflon 50r
coax??
simon g0zen
uk prefered but anywhere will do..

1424. Re: teflon coax source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 02:10:10 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <6mV6a.786$Uy4.68021@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37527

http://www.rfparts.com/coax.html

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1046223219.32250@auth2.dns.griffin.net.uk...
> does anyone know of a supplier for 2.3mm and 3,3mm outside dia teflon 50r
> coax??
> simon g0zen
> uk prefered but anywhere will do..
>
>

1425. Re: TS-830 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 03:07:06 UTC
From: Shephed <roll1up@smkey.com>
Message-ID: <ubW6a.264389$i73.49714632@twister.neo.rr.com>
Source record: 37528

In layman's terms, it's a normal thing for the TS-830. :-)

"scharkalvin" <wa2mze@bellsouth.net> wrote in message
news:3E596644.3090907@bellsouth.net...
> Jim Rayburn wrote:
> > I have a TS-830 that when in cw and you transmit the freq goes up by
> > 00.000.8 every time. It does not do it in tune or USB/LSB. I was
wondering
> > if someone else had this problem and a quick fix.
> > Thanks
> > Jim
> > KC4BQK
> >
> >
>
> The TS830 has a partially synthesized hfo chain and a frequency counter
> display.
> Rigs that are totally systhesized (pll/dds) show the desired air
> frequency while rigs
> of the TS830 generation count the result (which changes based on the
> carrier osc and
> cw offset). It's not that it's less confusing not to show the offset in
> the new rigs, it's
> that they generate the offset AFTER the air frequency is selected, while
> the TS830
> HAS to show the result.
>
>

1426. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 07:28:02 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <60_6a.71272$zF6.4993628@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37529

Hi Max,
I would be glad to answer any questions that you might have on
the design. I am the designer of that receiver. Dale did add a few extra
features to the design, coming up with a really cool version. I don't know
it the Internet site that you happened upon had the DDS code. I would be
happy to send you the source code, and the hex code.

Pete

Dale Parfitt <parinc@gte.net> wrote in message
news:3E5BBF61.6E6CA0BF@gte.net...
>
>
> Max wrote:
>
> > Dear All
> >
> > On my way through the Internet I found some schematics over
> > a Communication Reciever probely made by KE9OA Pete
> > Gianakopolus.
> > Any comments on that Reciever ??
> > And does anybody know where to find more info ???
> >
> > Regards from Denmark
> >
> > Max
>
> You can view my version of Pete's RX at:
> http://www.parelectronics.com/pics/old/Pg150.jpg
>
> I am very satisfied with its performance. Still working w/ different AM
> sync detectors and ceramic resonators to fix the USB and LSB BFO
> injection frequencies.
> Also added a Collins 2nd IF filter for better CW/SSB selectivity. Pete's
> major aim was an AM RX- and in that regard the Philipps 2nd IF/ full
> wave AM demod yields the best sounding AM of ANY RX I have owned- and
> that's a pile of 'em.
>
> Dale W4OP
> for PAR Electronics, Inc.
>

1427. Re: ATV Transmitter project??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 11:30:48 UTC
From: conconemail@libero.it
Message-ID: <bcd1b798.0302260330.5da8f904@posting.google.com>
Source record: 37530

give a look here:

http://www.dxzone.com/catalog/Operating_Modes/Amateur_Television/

you may find something usefull on ATV

1428. wanted : info on Marconi receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 13:26:13 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3e5cbe47_2@corp-news.newsgroups.com>
Source record: 37531

Hello all,

I have this receiver:

http://www.ott.igs.net/~jcb/misc/csr2/csr2.html

I hoping that some one has general historical / service / operators info on it. I have it working well, and before I start searching to see whether it would be appropriate for a local museum, I'd like to know a bit more about it.

To those who will email asking :: no, it's not for sale.

thank you and cheers
--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

1429. FA: 400 Watts on 144, 220, or 432 Mhz..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 16:36:19 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <7267a.73355$4F3.6076347@news2.east.cox.net>
Source record: 37532
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3009041615

Thanks for looking..

KQ4BY

1430. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 18:06:37 UTC
From: wa5bdu@yahoo.com
Message-ID: <ca1a467b.0302261006.37b99dcf@posting.google.com>
Source record: 37533

If cheap is what you seek, check out BG Micro. They have a tube of 25
National LM-3820N AM radio chips for $3.00. I haven't tried 'em
though, and have had a hard time finding any data on the net. But
BG's web site has a simple data sheet.

Speaking of the TDA-1072, I had some fun (?) trying to build a 40
meter CW receiver out of one recently. See it at

http://www.cox-internet.com/wa5bdu/1chiprx.htm

73--Nick, WA5BDU
in Arkansas

1431. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 18:17:44 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5d0493$0$131$edfadb0f@dtext02.news.tele.dk>
Source record: 37534

Helo Dale

> You can view my version of Pete's RX at:
> http://www.parelectronics.com/pics/old/Pg150.jpg

I must say that it look's very nice, a real looking radio,
it do not look like amateur work, but more like somthing
from the hand of a proffesionel. If it work's just half as
good as it look's, it must be a great reciever.

Regards Max

1432. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 18:27:35 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5d06e2$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 37535

Hello Pete

> I would be glad to answer any questions that you might have on
> the design. I am the designer of that receiver. Dale did add a few extra
> features to the design, coming up with a really cool version. I don't
know
> it the Internet site that you happened upon had the DDS code. I would be
> happy to send you the source code, and the hex code.

It is very nice of you to offer me help, I might have to use it. I got the
code
for the DDS as ASM and HEX. As a start I was just asking to find out if
it was somthing to build, and I now am convinced and I will start looking
a little deeper into the schematics. My plan was to build it as a black
box with only the display on it and do all the control from my computer,
something like a Winradio, but homebuild to a mich lower price. I already
have several Ham and SWL radios, but I would like to have one by my
computer, my radios is down in the shack in the cellar and my computer
is here in my office on the first floor, so it would be nice to have a radio
here to monitor the bands. I will mail you when I am a little more wiser,
I am shure that there will pop some questions up on the way.

Vy 73 de OZ7AFF Max

1433. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 18:28:22 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E5D0745.3000308@attbi.com>
Source record: 37536

Nick,
That's a keeper, I've been a "KNOWN ABUSER" of the Motorola FM IF chips used in cordless telephones to make simple receivers. I'll have to try your circuit, only problem is I can't get the parts from my favorite supply house for the Motorola stuff. (The local thrift stores).
Bill Higdon
Nick Kennedy wrote:
> If cheap is what you seek, check out BG Micro. They have a tube of 25
> National LM-3820N AM radio chips for $3.00. I haven't tried 'em
> though, and have had a hard time finding any data on the net. But
> BG's web site has a simple data sheet.
>
> Speaking of the TDA-1072, I had some fun (?) trying to build a 40
> meter CW receiver out of one recently. See it at
>
> http://www.cox-internet.com/wa5bdu/1chiprx.htm
>
> 73--Nick, WA5BDU
> in Arkansas

1434. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 18:30:17 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E5D07B9.9050109@attbi.com>
Source record: 37537

I might want to build one of these can you point me to a web page of the
basics? It'll be a couple of steps up from my "abused" Motorola chip set.
Bill Higdon

Thanks,
Bill Higdon
Max wrote:
> Helo Dale
>
>
>>You can view my version of Pete's RX at:
>>http://www.parelectronics.com/pics/old/Pg150.jpg
>
>
> I must say that it look's very nice, a real looking radio,
> it do not look like amateur work, but more like somthing
> from the hand of a proffesionel. If it work's just half as
> good as it look's, it must be a great reciever.
>
> Regards Max
>
>

1435. Re: AM radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 19:34:04 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5d1677$0$146$edfadb0f@dtext02.news.tele.dk>
Source record: 37538

Hello Nick

> If cheap is what you seek, check out BG Micro. They have a tube of 25
> National LM-3820N AM radio chips for $3.00. I haven't tried 'em
> though, and have had a hard time finding any data on the net. But
> BG's web site has a simple data shee

In my 1982 databook from National is there 4 pages of data for
LM3820, with some applikations notes on the coil design for it.
If you or any other is interested in a scan of them, please let me know,
I then will mail them.

Regards Max

1436. extension speaker cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 20:09:32 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <8997a.1358$ty3.189@fe03.atl2.webusenet.com>
Source record: 37539

I would like to add an extension to an HF radio in the shack. The speaker is amplified thus requiring 12v DC. The length of wire
required will be approx. 15-20'.

Should I be concerned about using a 'special' (e.g. shielded) wire for audio?

Any recommendations for wire? Seems to me over the years I've read of guys using a certain coax for speaker wire ... but the memory
is not clear.

Thanks for the help!
Vic

1437. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 21:29:12 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <b$iluhZoGTX+EwJ4@fslife.co.uk>
Source record: 37541

Lasse,

>While digging in my deep junkbox I came across this mint EZM spectrum
>monitor. Looks as if it never been put into any use at all, I am
>really curioius if there is a good use for it?
>
>According to the date stamp on components it must have been assembled
>in 89 or 90! It is NOT Y2K compliant, as the clock refuses to go
>highter than 1999. It operates from both 220 VAC and 24 VDC, having a
>built-in CRT.
>
>If no one can come up with a useful application of the machine, I'll
>junk it and collect all the SMB, VCXO, and crystal filters that are
>stuffed inside. BTW great 19 inch box excellent for stuffing a
>luggable amp or HF rig inside... but I hate to trash an instrument
>that someone might need!.
>
>Pity I haven't got the ESH3 receiver ;-(

I have the R & S ESH 2 receiver.

I imagine what you have is a matching Panoramic Display Unit with a
10.4MHz IF in. I could be wrong.

I could also be interested should you decide to sell. It would make a
nice companion to the rx, especially if it works.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1438. Still searching for Philips datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 21:30:49 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <tvKoqDaJITX+EwPg@fslife.co.uk>
Source record: 37540

On the BLY 92A.

Can anyone help?

No luck with Philips to date.

Tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1439. SAW osc ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 23:08:06 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5qi6qcbc4fh47@corp.supernews.com>
Source record: 37542

My HP 8950a spectrum analyzer is deaf and this could be becasue the 3rd LO/Cal. Out isn't operating. It has a surface acouttic wave (SAW) oscillator running at 299.9 MHz. The oscillator time by Y1 which is a SAW device, two transistors and associated components. The module is intermittent, however it's on a pcb that needs an extender that I don't have and poweron testing is nearly impossible. On rare occasions I can see 299.8 MHz on my counter especially if I turn the L1 slug,and then it can jum to 313MHz or higher but most of the time nothing. On low band I sometimes count 40 to 50 to 60 odd MHz. As you can see I don't know doodly sqat about SAW devices and would like to know how to test these things. Hopefully something else is bad because I understand it's unobtainium. All help appreciated.
tnx
hank wd5jfr

1440. Re: Rohde & Schwarz EZM Spectrum Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-26 23:17:59 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5qipbm9tsr253@corp.supernews.com>
Source record: 37543

I have an ESH3 and EZM, both not working and I'm looking for manuals. I
don't have any software for the EZM and wonder if you have any? I'm also
interested in buying it especially if it works.
tnx
hank wd5jfr

"Lasse" <no_email@today.sri> wrote in message
news:defn5vs799hlmkai9g81r0fjp5s3dsbmii@4ax.com...
> While digging in my deep junkbox I came across this mint EZM spectrum
> monitor. Looks as if it never been put into any use at all, I am
> really curioius if there is a good use for it?
>
> According to the date stamp on components it must have been assembled
> in 89 or 90! It is NOT Y2K compliant, as the clock refuses to go
> highter than 1999. It operates from both 220 VAC and 24 VDC, having a
> built-in CRT.
>
> If no one can come up with a useful application of the machine, I'll
> junk it and collect all the SMB, VCXO, and crystal filters that are
> stuffed inside. BTW great 19 inch box excellent for stuffing a
> luggable amp or HF rig inside... but I hate to trash an instrument
> that someone might need!.
>
> Pity I haven't got the ESH3 receiver ;-(
>
> No I do not have the manual.....
>
> /Lasse SM5GLC

1441. Re: FA: 400 Watts on 144, 220, or 432 Mhz..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 00:21:06 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E5D59F2.BE22AFB3@ieee.org>
Source record: 37545
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

ga_boneyard wrote:

> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3009041615
>
> Thanks for looking..
>
> KQ4BY

Not sure how much power can be got from a "not tested, as is" amplifier.

Bill K7NOM

1442. Novice question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 00:48:52 UTC
From: N G <vze26gh4@verizon.net>
Message-ID: <Ufd7a.19679$x.10940@nwrdny01.gnilink.net>
Source record: 37397

I want to add a small LED to a 6 volt DC crcuit as an on-off indicator. Do I add the LED in series or parralel to the powerswitch and do I need a resistor?
Thanks for advice.

1443. Re: Still searching for Philips datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 00:51:56 UTC
From: larryc@northwest.com
Message-ID: <3E5D612B.323D2727@northwest.com>
Source record: 37546

http://www.geocities.com/ffotis/rfdata.html#TRANSISTOR

check here...

==========
Philip de Cadenet wrote:

> On the BLY 92A.
>
> Can anyone help?
>
> No luck with Philips to date.
>
> Tnx
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

1444. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 00:53:00 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnb5qobc.jt.eikelan@ID-77364.user.dfncis.de>
Source record: 37544

J M Noeding wrote:
> On 12 Feb 2003 00:02:46 -0800, remove_ok1sip@atlas.cz (OK1SIP) wrote:
>
> >Look at http://w1.859.telia.com/~u85920178/use/gdo.htm
> >
> >73 de Ivan OK1SIP
>
>
> put some more information on my site http://home.online.no/~la8ak/
> pse excuse me as I have little experience in this, and will eventually
> change some details later
>
> 73
> Jan-Martin
> --
> remove ,xnd to reply

I couldn't get anything but 404 from your earlier posted web page,
but this one works. Thanks for sharing the information - especially
the "DIP"-meter with the HF-generator. As long as I don't have to
carry my generator onto the aerial tower it's OK. Up there I prefer
a FET-dip-meter :-)

Kind regards, Eike

1445. Powerpoles and Powerwerx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 01:39:33 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E5D6C55.B86DB53@osite.com.br>
Source record: 37398

Guys,

I wish to share my impressions regardind doing bussiness
with Ken Mirabella.

I decided to connectorize my power cords with Powerpoles. I
have a dealer in Sï¿½o Paulo, Brazil that carries the PP45
line. They are charging US$3.6 each pair. Molex type
connectors are about 50 cents. They can send me the
connector the same day.

But, as I am also considering buying a Rigrunner, I checked
Powerwerx for prices.
The price range is good, but there was no way I could send
it to myself... Brazil wasn't on the country list.

An email sent to Ken, and he promptly added my country! The
shipping options didn't allow for (very) small orders, like
mine...Just 25 PP45 pairs. Another email and Ken promptly
added another shipping option!

This guy is awesome!

While I was writing this, Ken wrote me again. There is
nothing I can say to express how he care about his
customers... I haven't even placed the order!!
That is Customer Relation Management!!!

NOTE: I am in no way affiliated with Ken, Powerwerx or any
other company implicitly or explicitly mentioned on the
message.

--
Paulo E.P. Marcondes
PU2PIX
pepm@osite.com.br

1446. Re: Novice question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 02:06:56 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E5D72C0.6050908@bellsouth.net>
Source record: 37399

N G wrote:
> I want to add a small LED to a 6 volt DC crcuit as an on-off indicator. Do I
> add the LED in series or parralel to the powerswitch and do I need a
> resistor?
> Thanks for advice.
>
>

The led should go across the load (from the switched side of the switch
to the return)
and you do need a resistor in series with the led. Most leds have a
voltage drop across them
from 1.5 to 3 volts and run at 5 to 25ma. So with a 6 volt supply and
assuming a 4.5 volt drop
at 5 ma you need a 900 ohm resistor. Depending on the led, typical
resistor values of 220 to 1k
ohms are used. If the led doesn't get hot or isn't too bright you can
pick something in this
range.

A half watt resistor will be fine.

1447. FS: New KT88 Genelex power tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 03:46:14 UTC
From: "." <erpi@revelstoke.net>
Message-ID: <aSf7a.63475$495.3354003@news1.telusplanet.net>
Source record: 37400
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

I do have for a new KT88 Genelex beam power tube...this tube sell fro
$275.00 at ANTIQUE RADIO and RF PARTS.....I will sell it for $190.00 plus
half of the shipping..only one on hand.....feel free to contact me..
erpi@revelstoke.net

1448. motorola msr 2000 vhf manual wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 03:57:37 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <R0g7a.50296$LR3.4747477@charlie.risq.qc.ca>
Source record: 37401

hi all,
i am looking for manuals for a repeater my radio club baught.
we thaught that by buying it for a surplus goverment we would have it,,,no
luck.
we are seeking help from the ham communauty.
any help will be appreciated

she is vhf

73/s and merci

ve2ckn
gervais
ve2ckn@hotmail.com

1449. Specs on UXCV11 power triode needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 04:09:40 UTC
From: Lawrence Gruber <ljgruber@attbi.com>
Message-ID: <3E5D8F48.6C2A2CDF@attbi.com>
Source record: 37402
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.boatanchors

Could anyone tell me where I can find the specs on a UXCV11 power triode? Thanks in advance! Larry

1450. Re: Still searching for Philips datasheet - BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 04:35:46 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0302262035.3f237480@posting.google.com>
Source record: 37403

See http://www.advancedsemiconductor.com/crossref.html look for BLY92A

which references

http://www.advancedsemiconductor.com/pdf/vhb10_28s.pdf

Which claims to be a cross.

28V, 10dB, 175MHz, Class C.

Hope that helps.

Mark

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:<tvKoqDaJITX+EwPg@fslife.co.uk>...
> On the BLY 92A.
>
> Can anyone help?
>
> No luck with Philips to date.
>
> Tnx

1451. Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 05:29:37 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0302262129.175ef251@posting.google.com>
Source record: 37404
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Here is the application:
I am working on an SWR/wattmeter with a wide dynamic range. The design is just like the one at http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except that I will need a more complex rectification system. I use the same 10:1 turns ratios and the same 50-ohm resistances. The sampled forward voltage is 10V at the top power transmitted power level (200W) and .1V at the lowest transmitted power level (20mW). For an SWR of 1.22, the sampled reflected voltage will be 1V for 200W of transmitted power and .01V for 20mW of transmitted power.

The problem:
I am trying to rectify the RF voltages into DC voltages of the same amplitude. The frequency range is 1.6MHz-30MHz, and the voltage amplitude range is .01V to 10V. RF amplifiers are not a viable solution (not equipped to use SOICs, all my supplies are DIP). Amplifying the DC voltages with an ordinary op amp will not work due to the contamination from the offset voltage. And conventional audio op-amps like the 741 lack the bandwidth I need. So the only solution left for me is a chopper amplifier, which converts the DC voltages into audio frequency voltages, which are much easier to work with than DC or RF.

The questions:
What should I look for in a chopper amplifier? Did any chopper amplifiers that you have worked with have strange characteristics that affected performance? Are there any other issues I need to be aware of? Tell me about your experiences, because I have never seen a chopper amplifier before and have absolutely NO experience with any.

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

1452. For all interested in morse code...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 05:31:28 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3e5da2ab@news.comindico.com.au>
Source record: 37405

http://www.qsl.net/vk2icq

I have provided a temporary link to an ABC radio program. I am not sure how long they will provide the real audio stream....

The program is 53 minutes long.... it's fantastic.

Cheers

1453. Re: motorola msr 2000 vhf manual wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 06:21:19 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18c74e37eb681e74989792@192.168.42.131>
Source record: 37406

In article <R0g7a.50296$LR3.4747477@charlie.risq.qc.ca>,
gfillio1@globetrotter.net says...

> hi all,
> i am looking for manuals for a repeater my radio club baught.
> we thaught that by buying it for a surplus goverment we would have it,,,no
> luck.
> we are seeking help from the ham communauty.
> any help will be appreciated
>
> she is vhf

SHAMELESS PLUG ALERT!

I'm a Motorola reseller that specializes in service to the amateur
community. If you can give me the exact model number of the repeater,
I'll see what I can find out for you.

It will likely begin with 'C73,' and will have a whole string of
other characters after it. Look on the side or edge of the cabinet for
the model/serial plate, and either post a note here in the group or drop
me an E-mail (your call).

Thanks much.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1454. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 06:58:01 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <ZFi7a.72823$zF6.5113763@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37407

That sounds good, Max. Feel free to give me a shout, when you are all set.
My e-mail address is n.gianakopoulos@worldnet.att.net.

Pete

Max <Max_Jens@post9.tele.dk> wrote in message
news:3e5d06e2$0$147$edfadb0f@dtext02.news.tele.dk...
> Hello Pete
>
> > I would be glad to answer any questions that you might have
on
> > the design. I am the designer of that receiver. Dale did add a few
extra
> > features to the design, coming up with a really cool version. I don't
> know
> > it the Internet site that you happened upon had the DDS code. I would
be
> > happy to send you the source code, and the hex code.
>
> It is very nice of you to offer me help, I might have to use it. I got the
> code
> for the DDS as ASM and HEX. As a start I was just asking to find out if
> it was somthing to build, and I now am convinced and I will start looking
> a little deeper into the schematics. My plan was to build it as a black
> box with only the display on it and do all the control from my computer,
> something like a Winradio, but homebuild to a mich lower price. I already
> have several Ham and SWL radios, but I would like to have one by my
> computer, my radios is down in the shack in the cellar and my computer
> is here in my office on the first floor, so it would be nice to have a
radio
> here to monitor the bands. I will mail you when I am a little more wiser,
> I am shure that there will pop some questions up on the way.
>
> Vy 73 de OZ7AFF Max
>
>

1455. FA: tubes, ends soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 07:00:30 UTC
From: ethan <NOarficusSPAHM@yahoo.com>
Message-ID: <ili7a.284020$Ec4.288547@rwcrnsc52.ops.asp.att.net>
Source record: 37408
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

```
Lot of NOS and used Loctal tubes
ends Feb-27-03 14:02:35 PST
currently at $4.99, no reserve
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160956789

55 ST shouldered tubes, NOS and used
ends Feb-27-03 16:41:43 PST
currently at $19.99, no reserve
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2160984300
```

1456. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 07:01:23 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <7Ji7a.72826$zF6.5113934@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37409

Hey, Bill,
Feel free to e-mail me directly, and I will send you all of
the details, including schematics and board layouts.

Pete

Bill Higdon <w.higdon@attbi.com> wrote in message
news:3E5D07B9.9050109@attbi.com...
> I might want to build one of these can you point me to a web page of the
> basics? It'll be a couple of steps up from my "abused" Motorola chip set.
> Bill Higdon
>
> Thanks,
> Bill Higdon
> Max wrote:
> > Helo Dale
> >
> >
> >>You can view my version of Pete's RX at:
> >>http://www.parelectronics.com/pics/old/Pg150.jpg
> >
> >
> > I must say that it look's very nice, a real looking radio,
> > it do not look like amateur work, but more like somthing
> > from the hand of a proffesionel. If it work's just half as
> > good as it look's, it must be a great reciever.
> >
> > Regards Max
> >
> >
>
>

1457. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 07:18:10 UTC
From: Robert Baer <robertbaer@earthlink.net>
Message-ID: <3E5DBBFE.3F74A74D@earthlink.net>
Source record: 37410
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu wrote:
>
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

Well, there are a lot of inexpensive opamps that have bandwidths that
are in the hundreds of MHz (SOIC and DIP) that make RF amplification
easier than you seem to indicate.
And, there are a lot of cheap opamps that have low microvolt offsets.
So, with either of those as a solution, you will be better served,
since it is a bitch to rectify that 10mV signal.

1458. Re: SAW osc ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 07:19:20 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <YZi7a.72836$zF6.5114413@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37411

Hi Hank,
I would try injecting a signal from an RF Generator at that
point. Use -30dBm as an initial starting level, and increase it slowly, to
see if there is a response. I probably wouldn't try more than 0dBm,
although if a diode ring mixer is being fed, +7dBm would be an ok level. I
am not sure if you have the service manual, but that would give you the
level chart.

Pete

Henry Kolesnik <wd5jfr@oklahoma.net> wrote in message
news:v5qi6qcbc4fh47@corp.supernews.com...
> My HP 8950a spectrum analyzer is deaf and this could be becasue the 3rd
> LO/Cal. Out isn't operating. It has a surface acouttic wave (SAW)
> oscillator running at 299.9 MHz. The oscillator time by Y1 which is a
SAW
> device, two transistors and associated components. The module is
> intermittent, however it's on a pcb that needs an extender that I don't
have
> and poweron testing is nearly impossible. On rare occasions I can see
299.8
> MHz on my counter especially if I turn the L1 slug,and then it can jum to
> 313MHz or higher but most of the time nothing. On low band I sometimes
> count 40 to 50 to 60 odd MHz. As you can see I don't know doodly sqat
about
> SAW devices and would like to know how to test these things. Hopefully
> something else is bad because I understand it's unobtainium. All help
> appreciated.
> tnx
> hank wd5jfr
>
>

1459. Re: motorola msr 2000 vhf manual wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 07:57:25 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <Fxj7a.50309$LR3.4763323@charlie.risq.qc.ca>
Source record: 37412

hi bruce,
i will take theses numbers this week-end,i am working late this wek,,,,dont have much time for the hobby
thanks for your help

gervais fillion
ve2ckn
rimouski,quebec
"Bruce Lane" <SpammersAreVermin@dev.nul> a crit dans le message de news: MPG.18c74e37eb681e74989792@192.168.42.131...
> In article <R0g7a.50296$LR3.4747477@charlie.risq.qc.ca>,
> gfillio1@globetrotter.net says...
>
> > hi all,
> > i am looking for manuals for a repeater my radio club baught.
> > we thaught that by buying it for a surplus goverment we would have it,,,no
> > luck.
> > we are seeking help from the ham communauty.
> > any help will be appreciated
> >
> > she is vhf
>
> SHAMELESS PLUG ALERT!
>
> I'm a Motorola reseller that specializes in service to the amateur
> community. If you can give me the exact model number of the repeater,
> I'll see what I can find out for you.
>
> It will likely begin with 'C73,' and will have a whole string of
> other characters after it. Look on the side or edge of the cabinet for
> the model/serial plate, and either post a note here in the group or drop
> me an E-mail (your call).
>
> Thanks much.
>
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

1460. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 08:35:53 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <J5k7a.42987$VH5.72110@news-server.bigpond.net.au>
Source record: 37413
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu wrote:
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the
same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level
(200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of
transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional
audio
> op-amps like the 741 lack the bandwidth I need. So the only
solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with
than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics
that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

A log amp would do the job I think.

I suggest you check http://analog.com

They have a range of log amps such as AD8307, with a dynamic range of 90dB @ 500MHz. I think they have DIP versions available. The data sheets include applications information for a 1uW to 1KW RF power meter using a single IC.

Steve Andrew

1461. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 08:38:54 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <y8k7a.42989$VH5.72221@news-server.bigpond.net.au>
Source record: 37414
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Sorry - That should be http://www.analog.com

This is a direct link to the AD8307

http://www.analog.com/Analog_Root/productPage/productHome/0%2C2121%2CAD8307%2C00.html

An 8 pin DIP version is available.

Steve Andrew

1462. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 08:41:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5rjoupuf6uidd@corp.supernews.com>
Source record: 37415
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I suggest that you take a look at "The Tandem Match - An Accurate Directional Wattmeter", by John Grebenkemper, QST, Jan. 1987, pp. 18-26. Also see "Tandem Match Corrections", Technical Correspondence, Jan. 1988, p. 49.

Roy Lewallen, W7EL

Jason Hsu wrote:
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. . .

1463. Re: Still searching for Philips datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 10:11:29 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <0IcOICGRReX+Ew87@fslife.co.uk>
Source record: 37416

Hi Larry,

>http://www.geocities.com/ffotis/rfdata.html#TRANSISTOR
>
>check here...
>
>================
>Philip de Cadenet wrote:
>
>> On the BLY 92A.
>>
>> Can anyone help?
>>
>> No luck with Philips to date.
Thank you for that.

However I also require the stud size and diameter of this device.

I should of stated this in my original post.

tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1464. Re: Still searching for Philips datasheet - BLY92A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 10:14:25 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <3loOIbGBUeX+EwdN@fslife.co.uk>
Source record: 37417

Hi Mark,

>See http://www.advancedsemiconductor.com/crossref.html look for BLY92A
>
>which references
>
>http://www.advancedsemiconductor.com/pdf/vhb10_28s.pdf
>
>Which claims to be a cross.
>
>28V, 10dB, 175MHz, Class C.
>
>Hope that helps.
>
>Mark
>
>Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in message
>news:<tvKoqDaJITX+EwPg@fslife.co.uk>...
>> On the BLY 92A.
Yes I think that looks like a suitable alternative.

I'll find a price.

Many thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1465. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 10:37:57 UTC
From: Ban <bansuri@masterweb.it>
Message-ID: <9UI7a.329127$AA2.12321247@news2.tin.it>
Source record: 37418
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Robert Baer wrote:
> Jason Hsu wrote:
>>
>> Here is the application:
>> I am working on an SWR/wattmeter with a wide dynamic range. The
>> design is just like the one at
>> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
>> that I will need a more complex rectification system. I use the same
>> 10:1 turns ratios and the same 50-ohm resistances. The sampled
>> forward voltage is 10V at the top power transmitted power level
>> (200W) and .1V at the lowest transmitted power level (20mW). For an
>> SWR of
>> 1.22, the sampled reflected voltage will be 1V for 200W of
>> transmitted power and .01V for 20mW of transmitted power.
>>
>> The problem:
>> I am trying to rectify the RF voltages into DC voltages of the same
>> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
>> amplitude range is .01V to 10V. RF amplifiers are not a viable
>> solution (not equipped to use SOICs, all my supplies are DIP).
>> Amplifying the DC voltages with an ordinary op amp will not work due
>> to the contamination from the offset voltage. And conventional audio
>> op-amps like the 741 lack the bandwidth I need. So the only solution
>> left for me is a chopper amplifier, which converts the DC voltages
>> into audio frequency voltages, which are much easier to work with
>> than DC or RF.
>>
>> The questions:
>> What should I look for in a chopper amplifier? Did any chopper
>> amplifiers that you have worked with have strange characteristics
>> that affected performance? Are there any other issues I need to be
>> aware of? Tell me about your experiences, because I have never seen
>> a chopper amplifier before and have absolutely NO experience with
>> any.
>>
>> Jason Hsu, AG4DG
>> usenet@@@@jasonhsu.com
>
> Well, there are a lot of inexpensive opamps that have bandwidths
> that are in the hundreds of MHz (SOIC and DIP) that make RF
> amplification easier than you seem to indicate.
> And, there are a lot of cheap opamps that have low microvolt

> offsets. So, with either of those as a solution, you will be better
> served, since it is a bitch to rectify that 10mV signal.

When I looked through the Analog Devices solutions bulletin of this month, I saw this AD8362 RMS-detector on the last page, which might serve for your purpose. It will require a bit of understanding to modify the chip for an SWR-meter, or even require a second one. The 60dB range and the fantastic bandwidth are promising though.
--
ciao Ban
electronic hardware designer
http://thinkamove.com/

1466. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 11:44:22 UTC
From: bill.sloman@ieee.org
Message-ID: <7c584d27.0302270344.164e4d80@posting.google.com>
Source record: 37419
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Robert Baer <robertbaer@earthlink.net> wrote in message
news:<3E5DBBFE.3F74A74D@earthlink.net>...
> Jason Hsu wrote:
> >
> > Here is the application:
> > I am working on an SWR/wattmeter with a wide dynamic range. The
> > design is just like the one at
> > http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> > that I will need a more complex rectification system. I use the same
> > 10:1 turns ratios and the same 50-ohm resistances. The sampled
> > forward voltage is 10V at the top power transmitted power level (200W)
> > and .1V at the lowest transmitted power level (20mW). For an SWR of
> > 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> > power and .01V for 20mW of transmitted power.
> >
> > The problem:
> > I am trying to rectify the RF voltages into DC voltages of the same
> > amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> > amplitude range is .01V to 10V. RF amplifiers are not a viable
> > solution (not equipped to use SOICs, all my supplies are DIP).
> > Amplifying the DC voltages with an ordinary op amp will not work due
> > to the contamination from the offset voltage. And conventional audio
> > op-amps like the 741 lack the bandwidth I need. So the only solution
> > left for me is a chopper amplifier, which converts the DC voltages
> > into audio frequency voltages, which are much easier to work with than
> > DC or RF.
> >
> > The questions:
> > What should I look for in a chopper amplifier? Did any chopper
> > amplifiers that you have worked with have strange characteristics that
> > affected performance? Are there any other issues I need to be aware
> > of? Tell me about your experiences, because I have never seen a
> > chopper amplifier before and have absolutely NO experience with any.
> >
> > Jason Hsu, AG4DG
> > usenet@@@@jasonhsu.com
>
> Well, there are a lot of inexpensive opamps that have bandwidths that
> are in the hundreds of MHz (SOIC and DIP) that make RF amplification
> easier than you seem to indicate.
> And, there are a lot of cheap opamps that have low microvolt offsets.
> So, with either of those as a solution, you will be better served,

> since it is a bitch to rectify that 10mV signal.

On the other hand, it wouldn't be that difficult to phase-sensitive detect/demodulate it by multiplying with the transmitter frequency.

You may have to do it twice - in-phase and in quadrature - to reliably capture the amplitude of the detected signal, but since this also gives you phase, this may be more of a feature than a bug.

The Analog Devices AD834 and AD835 parts are the first ones that come to my mind, but more RF-oriented engineers will think MiniCircuits mixers, and Jim Thompson will probably point out that the MC1496 is cheaper and quite fast enough.

Bill Sloman, Nijmegen

1467. Re: SAW osc ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 13:31:43 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <3ro7a.6900$hj.1969216@nnrp1.ptd.net>
Source record: 37420

Try taking the module out and inspecting it carefully under a
microscope or with a jewler's loupe ... use appropriate static
protection, of course.

The cause of intermittent operation could be a cracked solder
joint, a cracked chip cap or resistor, corrosion, etc. A careful
inspection may yeild the source of a relatively easily fixed problem.

Carl - wk3c

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v5qi6qcbc4fh47@corp.supernews.com...
> My HP 8950a spectrum analyzer is deaf and this could be becasue the 3rd
> LO/Cal. Out isn't operating. It has a surface acouttic wave (SAW)
> oscillator running at 299.9 MHz. The oscillator time by Y1 which is a
SAW
> device, two transistors and associated components. The module is
> intermittent, however it's on a pcb that needs an extender that I don't
have
> and poweron testing is nearly impossible. On rare occasions I can see
299.8
> MHz on my counter especially if I turn the L1 slug,and then it can jum to
> 313MHz or higher but most of the time nothing. On low band I sometimes
> count 40 to 50 to 60 odd MHz. As you can see I don't know doodly sqat
about
> SAW devices and would like to know how to test these things. Hopefully
> something else is bad because I understand it's unobtainium. All help
> appreciated.
> tnx
> hank wd5jfr
>
>

1468. Re: Still searching for Philips datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 13:57:31 UTC
From: no.spam.lasse.moell@no.spam.swipnet.se
Message-ID: <3e5e1907.19124002@news.lin.foa.se>
Source record: 37421

Philip
I have the complete data, I'll do a scan and send a pdf later today if
it is ok with you?

Lasse SM5GLC

On Wed, 26 Feb 2003 21:30:49 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>On the BLY 92A.
>
>Can anyone help?
>
>No luck with Philips to date.
>
>Tnx
>--
>Philip de Cadenet G4ZOW
>Transmitters 'R' Us
>http://www.transmittersrus.com

1469. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 15:38:35 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5e30c4$0$135$edfadb0f@dtext02.news.tele.dk>
Source record: 37422

Hello Pete

> That sounds good, Max. Feel free to give me a shout, when you are all
set.
> My e-mail address is n.gianakopoulos@worldnet.att.net.

That's Ham spirit.

I will give you a shout, but it might take some time, I do not work
fast, but steady.

Best 73 Max

1470. vlf grid dip mod ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 16:03:44 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5sdn3pmdfbu62@corp.supernews.com>
Source record: 37424

Anyone recall an article in one of the ham mags that presented a unique way
to get below the broadcast band using a dip meter that was later followed up
by another improvement?
tnx
hankwd5jfr

1471. Telegraphy training set FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 16:05:20 UTC
From: G4BXD@qsl.net
Message-ID: <3e5e3465.627532@news.compuserve.com>
Source record: 37423

Telegraphy training set FS

Telegraphy Wireless & Wire
Instructograph Co,Chicago, ILL.

Instructograph Morse Trainer, circa 1947, motor driven tape drive unit
that keys an oscillator, with headphones, 10 training tapes,manual,
and
reproduction key. Working with good clockwork motor. in very nice
condition,
clean and unmarked.

£70 plus postage.

BN.

1472. Re: vlf grid dip mod ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 16:14:36 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5sebfkpih9937@corp.supernews.com>
Source record: 37425

Found it Ham Radio Aug 79 and HR July 80.

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v5sdn3pmdfbu62@corp.supernews.com...
> Anyone recall an article in one of the ham mags that presented a unique
way
> to get below the broadcast band using a dip meter that was later followed
up
> by another improvement?
> tnx
> hankwd5jfr
>
>

1473. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 18:13:18 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0302271013.3eda973a@posting.google.com>
Source record: 37426
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0302262129.175ef251@posting.google.com>...
>[lots deleted]
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
Offset voltage is not a problem; you can simply introduce an identical
voltage of opposing polarity to null it out. The real issue, of course,
is whether it stays nulled out, or if something changes with temperature
or something else so you can't count on it.

I hate to say this, but it sure seems like the reason you are
now asking about choppers is because on the last iteration, you
got some suggestions of using them. But that was crossposted,
like this one, and I'm still not convinced choppers are necessary.
In other words, you may be going down a false path, based on
an initial false premise.

I can't remember ever seeing choppers in hobby circles. Oh,
people fiddled with them forty or fifty years ago, so they could
see DC fluctuation on their AC coupled scopes. And I suppose
there were some highly critical and very obscure use of them.
But the fact that you don't see them in hobby circles seems
like a good indication that you may be looking at the problem
wrong.

The only exception that immediately comes to mind was something
in Ham Radio magazine about 1978, I think by Joe Reisart, where
he used an AM modulated signal source, and then could use an
AC coupled amplifier after the detector. But my memory of
this is vague enought that I can't even remember what exactly
he was doing with it.

I think the initial problem is your misunderstanding of
offset problems. But to dismiss things like RF amplification
for trivial reasons like you can't find them in the right package
(people were building amplifiers long before there were ICs)
and likely plenty of other solutiions, before dismissing
choppers seems like you're going down a false path.

Michael

1474. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 18:23:57 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0302271023.32b37f2d@posting.google.com>
Source record: 37427

"Doug" <dougmelissa@tm.net> wrote in message
news:<l0n_9.49$Bd.77621@newshog.newsread.com>...
> A design for a crystal set calls for a 2000 ohm speaker
> and says a smaller, 8 ohm type will not work.
> The one for my walkman measures 26 ohms, the small
> speaker from radio shack measures 8 ohm - measured
> with ohmmeter (is that correct method?).
>
> Can someone explain why a set would work with a
> large but not small impedance speaker?
>
> Finally, where can I obtain a 2000 ohm speaker?
>
> Thanks,
> Doug

While I was looking for something else, I came across a couple of references that would apply. After a month, and over forty replies, I'm not going back to see if anyone has pointed them out.

The December 1997 issue of QST had an article about crystal radio building, "The Crystal Radio" by Dave Evison. I've never seen it, so I don't know how valuable it might be.

But in the August 1998 issue, there is a letter in the Technical Correspondence column about the article. The writer pretty much dismisses the need for high impedance headphones. The orignal writer then responds, talking about how important it is, and including some bits about how to match the coil to the headphone's impedance.

In the September 1998 issue, there is "The HZX Headphone Adaptor" on page 67. He describes a headphone amplifier using an op-amp, but makes the point that this is more as an impedance adaptor, to make use of readily available headphones, rather than an attempt at getting more sound out of a crystal radio. Before he gets to the circuit, he discusses passive solutions. And throughout the article he has bits about different types of headphones.

Michael VE2BVW

1475. Motorola MCS2000 MTS2000 Software - Tuner / CPS RVN4177L

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 20:09:46 UTC
From: Schlick Jones <enter@SPAM-_-SUX-takethisout_graffiti.net>
Message-ID: <egu7a.259834$iG3.29795@sccrnsc02>
Source record: 37428

I have a copy of CPS and Tuner Software for Motorola MCS2000 and MTS2000 radios 4 sale. You can reply in a post or email me if you are interested. It is RVN4177L Make sure to remove the anti-spam line in my email if you go that route. Thnx..

enter

1476. Re: Question on dual-gate MOSFETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 21:46:36 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0Hv7a.79322$P1.5229544@news1.east.cox.net>
Source record: 37429

Gate one is usually signal, gate 2 is usually used for AGC or
gain setting.

Pete

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:38ct4v8nhi1t1eatchrd89rt8547cpq5hh@4ax.com...
>
> If I plan to use only one gate of a DGM., which gate should I use? Or
> can I use either?
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

1477. 73 Index ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 22:13:57 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5t3d972ccop48@corp.supernews.com>
Source record: 37430

Has anyone found a annual index to Wayne Greens 73 magazine on the web?
I've search but had no luck.
tnx
hank wd5jfr

1478. Antenna for 2.4 Ghz wireless lan ... question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 22:20:18 UTC
From: brocjeff@isu.edu
Message-ID: <55307ff2.0302271420.8f56a65@posting.google.com>
Source record: 37431

I live about a mile (as the crow flies) from the university where I work. The university has a robust wireless system such that I can reach a wireless access point pretty much anywhere on campus... inside and out. From my deck, I can see the campus and if I take my laptop with a wireless card out there, I can occasionally get a "blip" on the cisco signal tracker. My question is this. Couldn't I get a higher gain antenna (or build one), hook it to a wireless PCI card for my desktop and be able to connect? The transmitting power of the card, is 100 mW but with a high gain antenna, shouldn't I be able to get the signal there? I have gone alot further with QRP type stuff but I am pretty nieve at this frequency.

Jeff

1479. Re: Antenna for 2.4 Ghz wireless lan ... question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 22:45:40 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <oyw7a.7383$hj.1999562@nnrp1.ptd.net>
Source record: 37432

If you have a clear path (which may be the case, since you say
you get an occasional "blip" with just the "normal" antenna on
your laptop), you might well be able to make the link.

I've done the link budget for the path from my home to my
company's nearest building (I telecommute from a home
office) and at over 8 miles, I'd have margin to burn for an
11Mbps link if I used standard 15-18 dBm output cards
with 23 dBi directional antennas at both ends of the link.
(However, I do have to point out that I "hold the high ground"
in that my house is on the highest point in the area with a quite
clear LOS view of the entire valley below in the direction of my
company's facility.)

Just remember that Part 15 equipment is certified for
use as a system with specific antennas and to substitute an
antenna that your PCI card wasn't certified with would be
a violation. (Yes, I know that people occasionally do so,
but it's not legal and you don't want/need the grief that such
a violation could cause.)

Carl - wk3c

"Jeff" <brocjeff@isu.edu> wrote in message
news:55307ff2.0302271420.8f56a65@posting.google.com...
> I live about a mile (as the crow flies) from the university where I
> work. The university has a robust wireless system such that I can
> reach a wireless access point pretty much anywhere on campus... inside
> and out. From my deck, I can see the campus and if I take my laptop
> with a wireless card out there, I can occasionally get a "blip" on the
> cisco signal tracker. My question is this. Couldn't I get a higher
> gain antenna (or build one), hook it to a wireless PCI card for my
> desktop and be able to connect? The transmitting power of the card,
> is 100 mW but with a high gain antenna, shouldn't I be able to get the
> signal there? I have gone alot further with QRP type stuff but I am
> pretty nieve at this frequency.
>
> Jeff

1480. Re: Antenna for 2.4 Ghz wireless lan ... question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 23:01:22 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5e988c$0$131$edfadb0f@dtext02.news.tele.dk>
Source record: 37433

Hello Jeff

> desktop and be able to connect? The transmitting power of the card,
> is 100 mW but with a high gain antenna, shouldn't I be able to get the
> signal there? I have gone alot further with QRP type stuff but I am
> pretty nieve at this frequency.

You can find a lot of stuff about it here

http://www.turnpoint.net/wireless/cantennahowto.html

http://www.qsl.net/n9zia/wireless/page04.html

http://www.trevormarshall.com/waveguides.htm

http://www.saunalahti.fi/~elepal/antenna2.html

http://guerrilla.net/reference/antennas/2ghz_collinear_omni_lowpwr/

http://guerrilla.net/reference/antennas/2ghz_collinear_omni/

http://www.seattlewireless.net/index.cgi/WirelessHardwareLinks

Regards Max

1481. Re: T/R switching for a 100W 2mtr amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-27 23:17:55 UTC
From: kc0atc@qsl.net
Message-ID: <a444e1b1.0302271517.469be239@posting.google.com>
Source record: 37434

Mark, thanks very much for your comments.

I was thinking... _if_ I can ensure that the
input to the amp is off when any output relay switching
occurs, shouldn't I then be able to us a smaller
relay at the power end? If I have to buy a new
coaxial relay, then I'm pretty much sunk.

For example here's some ASCII art:

```
rf 2 o--- AMP ---o 1
HT --{detection}----O---- ----O---- ANTENNA
circuit 3 O--------------O 4
relay 1 relay 2
```

If I can follow the numbers in my switching...
I think the relay at the antenna end would always
be switching while the amp is off. On transmit,
I would do #1 then #2. At end of transmit I would
do #3 then #4. I figured out how to do #3-->#4
using a capacitor in series with the relay coil.
But I haven't figured out how to cause #2 to come
after #1.

So, I was looking at a TR time-delay generator
project as shown in the 2001 ARRL handbook.
It looks to me like I could use something like
that to switch the hot end only after the
input had been switch out.

Does that sound good?

1482. Re: Wavetek 3000-200 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 00:55:35 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <bsy7a.80407$P1.5318245@news1.east.cox.net>
Source record: 37435

The tantalum bypass caps on the 15 volt busses are problem prone,
and will short. I'd had several module failures because of bypass
tantalums shorting.

The module is held in by the screw you noticed.

Peter

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20030221055727.10013.00000028@mb-mh.aol.com...
> Hi Group,
>
> I have a Wavetek unit that has what appears to be a shorted cap in one of
the
> modules. I need to remove the module to get inside it. Looking at the
bottom,
> it appears that the module is held in place with a screw and something
that
> looks like a stand off.
>
> Question is how to get the module out, if there are anything I would look
out
> for while removing it.
>
> Thanks,
>
> Paul

1483. srfe1057 transistor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 00:56:47 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046393808.363092@auth2.dns.griffin.net.uk>
Source record: 37436

anyone got specs on above tr...
thanks simon g0zen

1484. Re: Communications Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 00:57:16 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Mty7a.80413$P1.5318782@news1.east.cox.net>
Source record: 37437

Is anyone going to be doing a board run for Pete's RX?

Pete, k1zjh

1485. Re: Source for 70 MHz IF filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 00:59:09 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <xvy7a.80421$P1.5319650@news1.east.cox.net>
Source record: 37438

Heck, with the cascaded 9 MHz and 455 kHz IF filters, you might
want to think about adding variable BW and/or PassBand tuning.

Pete, k1zjh

"kenneth scharf" <wa2mze@bellsouth.net> wrote in message > I was thinking
of a design for an all band receiver too. The design I'm
> thinking of would use a first IF in the 6 meter band (variable if) so it
> would
> be an up converter working into a 6 meter receiver. Second if would be
9mhz
> (I found a half dozen if filters with an 8 pole shape and a bw of 3.2
> khz at Dayton
> a few years ago. Would use at least two of them in the if). Third IF
> would be
> either 455khz (also have a few Collins mechanical filters in the junk
> box, one
> with a 2.0 khz bw, one at 2.7khz) or 85khz (BC453 cans.) If I use the
> 85khz
> if's the stage will use a 6AR11 tube!
>
>

1486. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 01:01:06 UTC
From: averyfineman@aol.com
Message-ID: <20030227200106.19274.00000593@mb-fd.aol.com>
Source record: 37440

In article <J5k7a.42987$VH5.72110@news-server.bigpond.net.au>, "Steve Andrew"
<sjandrew@bigpond.net.au> writes:

>Jason Hsu wrote:
>> Here is the application:
>> I am working on an SWR/wattmeter with a wide dynamic range. The
>> design is just like the one at
>> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
>> that I will need a more complex rectification system. I use the
>same
>> 10:1 turns ratios and the same 50-ohm resistances. The sampled
>> forward voltage is 10V at the top power transmitted power level
>(200W)
>> and .1V at the lowest transmitted power level (20mW). For an SWR of
>> 1.22, the sampled reflected voltage will be 1V for 200W of
>transmitted
>> power and .01V for 20mW of transmitted power.
>>
>> The problem:
>> I am trying to rectify the RF voltages into DC voltages of the same
>> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
>> amplitude range is .01V to 10V. RF amplifiers are not a viable
>> solution (not equipped to use SOICs, all my supplies are DIP).
>> Amplifying the DC voltages with an ordinary op amp will not work due
>> to the contamination from the offset voltage. And conventional
>audio
>> op-amps like the 741 lack the bandwidth I need. So the only
>solution
>> left for me is a chopper amplifier, which converts the DC voltages
>> into audio frequency voltages, which are much easier to work with
>than
>> DC or RF.
>>
>> The questions:
>> What should I look for in a chopper amplifier? Did any chopper
>> amplifiers that you have worked with have strange characteristics
>that
>> affected performance? Are there any other issues I need to be aware
>> of? Tell me about your experiences, because I have never seen a
>> chopper amplifier before and have absolutely NO experience with any.
>>
>> Jason Hsu, AG4DG
>> usenet@@@@jasonhsu.com
>

>A log amp would do the job I think.
>
>I suggest you check http://analog.com
>
>They have a range of log amps such as AD8307, with a dynamic range of
>90dB @ 500MHz. I think they have DIP versions available. The data
>sheets include applications information for a 1uW to 1KW RF power
>meter using a single IC.

Good suggestion! Several greater-than-60-db RF power
meters have been made by Danish and German amateurs,
all covering low HF on up to edge of UHF. The most
illustrated website I've seen is by Thomas Scherrer, OZ2CPU.
(couldn't confirm that site just now due to ISP having fits)

Trying to chopper-stabilize amplify the DC out of diode
detectors of anything...and assuming accuracy better than
50% at low levels is not a good choice. It will also beget
more problems than expected since the diode detectors
themselves will drift away from a semblance of calibration
depending on ambient temperature. The AD8307 and other
"log amps" in the Analog Design family are amplifier chains
with successive detection and are also temperature
compensated over AD given specs.

Scherrer's website and power meter project uses only an AD
log amp plus a programmed PIC microcontroller for readout of
the logarithmic-scale DC out of the log amp and also to drive
a 2 x 40 character LCD display to show dbm or Watts
directly...and whatever else is desired on the display panel
(program adjustable). Others building the same power meter
in Europe have customized their displays as desired.

To measure forward and reflected power, a passive transformer
arranged as a directional coupler can be used...and can be
calibrated, both as to coupling, directivity, all over frequency to
yield a good accuracy. VSWR can be computed in the spare
memory of a PIC used for a log amp IC power meter. If the
calibration test/adjustment is good, the overall device will be
more accurate and more versatile than any all-analog system.

Transformer based directional couplers are rare in amateur
literature but they do exist. Mini-Circuits has a line of them
Some hams will be familiar with "hybrids" from telephone
patches...which are a form of transformer directional coupler.
Transformers can be built to couple into KiloWatts and output
just tiny milliWatts. The log amp IC will accept levels from
mW to picoWatts over a 60 db dynamic range. A combination
power meter and SWR indicator can be built that will read,
broadband on HF, accurately from 1 KW down to a few mW
without having to switch anything.

No comments have been seen in regards to calibration of
the proposed project. If that isn't considered, then the whole
project is academic...a useful exercise but does not result in
a viable power or SWR meter. Hint: Think calorimetrically.
That's the way the instrument makers check their power meters.

On chopper-stabilized amplifiers: Fine for vacuum tube op-
amps where differential circuit grids varied in large numbers of
milliVolts over temperature and aging. Not much need with the
modern instrumentation-grade, low-noise ICs used for things
like thermocouple output voltages. Lots of those ICs out there,
only slightly more cost than "standard" op-amps. The romance
of tales from yesteryear on nifty circuits using tubes is nice but
no longer practical. [been there, done that a long time ago and
am very glad to be away from that]

The old "chopper" (a fancy vibrating reed) is very hard to get and
will probably cost an arm, leg, and assorted other body parts.
A substitute for a mechanical device is the CMOS switch and
there are a number of those from several IC makers. Faster,
lower-noise (all around), very broad-band, zero or extremely low
device offsets, practically noise-free to the op-amp or solid-state
circuit being stabilized. It's more fun to play with Dan Tayloe's
elegant innovation of a switch used as a "DC" mixer.

Nobody, and I mean nobody is going to get even close to 50 or
60 db dynamic range out of any diode detector. The successive-
detection logarithmic IC will definitely do that, accurately over a
very wide RF bandwidth and over a wide temperature range.

Len Anderson
retired (from regular hours) electronics engineer person

1487. General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 01:02:20 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <wyy7a.3703$Uy4.295626@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37439

I've gotten a few more inquiries about my general coverage receiver design, so to make things simpler, I have created a WinZipped bundle that contains schematics, parts placement diagrams, and PDF files of all of the boards. This way, artwork can be printed directly on Inkjet or Laserjet transparencies, giving a good tool to use with photosensitive boards. The zipped file is 350KB, and you do need Adobe Reader to view the schematics and board information. Interested parties can feel free to e-mail me directly, and I will be glad to send the file out to you. I know that some of the folks out in NG land have had a hard time reading some of the GIF schematics that I had sent out, so all of you are welcome to shout me down! The next thing that I will be doing is adding another AGC loop ahead of the 1st mixer; after this addition, the receiver should be able to handle 2 or 3 volts of RF, but that is still a few months away.

Pete

1488. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 01:09:08 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <UEy7a.3711$Uy4.296709@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37441

Oh, I forgot to mention, the DDS code is also included in this bundle!

Pete

Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote in message
news:wyy7a.3703$Uy4.295626@bgtnsc05-news.ops.worldnet.att.net...
> I've gotten a few more inquiries about my general coverage receiver
design,
> so to make things simpler, I have created a WinZipped bundle that contains
> schematics, parts placement diagrams, and PDF files of all of the boards.
> This way, artwork can be printed directly on Inkjet or Laserjet
> transparencies, giving a good tool to use with photosensitive boards. The
> zipped file is 350KB, and you do need Adobe Reader to view the schematics
> and board information. Interested parties can feel free to e-mail me
> directly, and I will be glad to send the file out to you. I know that
some
> of the folks out in NG land have had a hard time reading some of the GIF
> schematics that I had sent out, so all of you are welcome to shout me
down!
> The next thing that I will be doing is adding another AGC loop ahead of
the
> 1st mixer; after this addition, the receiver should be able to handle 2 or
3
> volts of RF, but that is still a few months away.
>
> Pete
>
>

1489. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 01:26:24 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>
Source record: 37442
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

You realize that nobody under the age of 60 knows what a chopper amplifier is?

Tam/WB2TT

1490. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 02:04:01 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5EC372.75B433DC@attbi.com>
Source record: 37443
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

And very few over the age of 60!

I'm 65 and my last chopper stabilized amplifier design job was in 1963.
My use was to amplify a 0.1 Hz signal with 0.005 Vp maximum.

In those days they were used to monitor very low level of DC [DC]
signals. Amplifiers were made by George Philbrick Laboratories.

A wide band amplifier with offset trimmed to zero and operating from a
well regulated power supply in a moderately temperature controlled
environment should meet the original needs. Use a high Gain-bandwidth
amplifier at least to 300 MHz.

Deacon Dave, W1MCE

Tarmo Tammaru wrote:
>
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

1491. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 02:13:05 UTC
From: Alan McClure <mcclures@gwis.com>
Message-ID: <3E5EC5B1.83588D76@gwis.com>
Source record: 37444
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I'm under 60, (by a few years) and I know and worked on chopper
stabilized instrument amplifiers for over eight years in the late 70's and
early 80's. These were double pole double throw mechanical choppers,
some 60 hz but most were 103 Hz units. 103 Hz being prime relative to
both 60 Hz and 50 Hz and their harmonics.
The application was an instrumentation amplifier to amplify the differential
voltage of two thermocouples in connected series opposing. Gain was
15000 and meaningful signal out could be .1 millivolts to an XYY plotter.
You do the math.
ARM

Tarmo Tammaru wrote:

> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

1492. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 02:30:37 UTC
From: n9pt <nutmeg@w-link.net>
Message-ID: <3E5EC9CD.AACE2BCF@w-link.net>
Source record: 37445

I'd like the URL to the radio info, please.

Pete

Pete KE9OA wrote:

> I've gotten a few more inquiries about my general coverage receiver design,
> so to make things simpler, I have created a WinZipped bundle that contains
> schematics, parts placement diagrams, and PDF files of all of the boards.
> This way, artwork can be printed directly on Inkjet or Laserjet
> transparencies, giving a good tool to use with photosensitive boards. The
> zipped file is 350KB, and you do need Adobe Reader to view the schematics
> and board information. Interested parties can feel free to e-mail me
> directly, and I will be glad to send the file out to you. I know that some
> of the folks out in NG land have had a hard time reading some of the GIF
> schematics that I had sent out, so all of you are welcome to shout me down!
> The next thing that I will be doing is adding another AGC loop ahead of the
> 1st mixer; after this addition, the receiver should be able to handle 2 or 3
> volts of RF, but that is still a few months away.
>
> Pete

1493. Re: Novice question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 02:45:57 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <F3A7a.73925$zF6.5208499@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37446

Most LEDs require a resistor in series...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"N G" <vze26gh4@verizon.net> wrote in message
news:Ufd7a.19679$x.10940@nwrdny01.gnilink.net...
> I want to add a small LED to a 6 volt DC crcuit as an on-off indicator. Do
I
> add the LED in series or parralel to the powerswitch and do I need a
> resistor?
> Thanks for advice.
>
>

1494. FS: NIB KT88 Genelex power tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 02:47:34 UTC
From: Rick <erpi@revelstoke.net>
Message-ID: <a5A7a.200$W%5.37246@news1.telusplanet.net>
Source record: 37347
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.swap

I do have for sale a new KT88 Genelex power tube,RF PARTS Ltd and ANTIQUE RADIO Ltd sell this tube for $275.00 and both are out for a while.I will sell mine for $190.00 plus half the shipping...feel free to contact me for any info..
erpi@revelstoke.net

1495. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 03:52:04 UTC
From: "Keith R. Williams" <krw@attglobal.net>
Message-ID: <MPG.18c8a6eeffa3959298a0c5@enews.newsguy.com>
Source record: 37348
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>, t-tammaru@home.com says...
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?

Nonsense. I'm not 60 (just 32h ;-) and know perfectly well what they are. I worked on vibrator-stabilized op-amps on the analog computers in college. Choppers were required to get the gain necessary for four significant digits. The servo multipliers and sine converters were the real hoot.

--
Keith

1496. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 04:54:02 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E5EEB69.10701@attbi.com>
Source record: 37349
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I ca't remeber who makes the silicon ones but I've worked with some nice
I.C. chpper amps recently.
Bill Higdon
Keith R. Williams wrote:
> In article <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>, t-
> tammaru@home.com says...
>
>>You realize that nobody under the age of 60 knows what a chopper amplifier
>>is?
>
>
> Nonsense. I'm not 60 (just 32h ;-) and know perfectly well what
> they are. I worked on vibrator-stabilized op-amps on the analog
> computers in college. Choppers were required to get the gain
> necessary for four significant digits. The servo multipliers and
> sine converters were the real hoot.
>

1497. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 04:54:39 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <jYB7a.74106$zF6.5225078@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37350

There is no URL; folks have been e-mailing me directly, and I have been sending out the file. One thing, though. You need Adobe Acrobat Reader Version 5.0 to read and print the files. This is a free download from the Adobe site.

Pete

n9pt <nutmeg@w-link.net> wrote in message news:3E5EC9CD.AACE2BCF@w-link.net...
> I'd like the URL to the radio info, please.
>
> Pete
>
> Pete KE9OA wrote:
>
> > I've gotten a few more inquiries about my general coverage receiver design,
> > so to make things simpler, I have created a WinZipped bundle that contains
> > schematics, parts placement diagrams, and PDF files of all of the boards.
> > This way, artwork can be printed directly on Inkjet or Laserjet
> > transparencies, giving a good tool to use with photosensitive boards. The
> > zipped file is 350KB, and you do need Adobe Reader to view the schematics
> > and board information. Interested parties can feel free to e-mail me
> > directly, and I will be glad to send the file out to you. I know that some
> > of the folks out in NG land have had a hard time reading some of the GIF
> > schematics that I had sent out, so all of you are welcome to shout me down!
> > The next thing that I will be doing is adding another AGC loop ahead of the
> > 1st mixer; after this addition, the receiver should be able to handle 2 or 3
> > volts of RF, but that is still a few months away.
> >
> > Pete
>

1498. Re: Powerpoles and Powerwerx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 06:10:59 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <x2D7a.12059$V9.8248@fe08.atl2.webusenet.com>
Source record: 37351

Paulo,

It was refreshing to hear something positive concerning American business. There has been soooo much bad lately.

I too am using Powerpoles. Just got through making a couple of cables using the connectors. If you've not tried them yet, I believe
you will be very happy with them.

All the best,

Vic / KE4QJK

___
"Paulo Marcondes" <pepm@osite.com.br> wrote in message news:3E5D6C55.B86DB53@osite.com.br...
> Guys,
>
> I wish to share my impressions regardind doing bussiness
> with Ken Mirabella.
>
> I decided to connectorize my power cords with Powerpoles. I
> have a dealer in S�o Paulo, Brazil that carries the PP45
> line. They are charging US$3.6 each pair. Molex type
> connectors are about 50 cents. They can send me the
> connector the same day.
>
> But, as I am also considering buying a Rigrunner, I checked
> Powerwerx for prices.
> The price range is good, but there was no way I could send
> it to myself... Brazil wasn't on the country list.
>
> An email sent to Ken, and he promptly added my country! The
> shipping options didn't allow for (very) small orders, like
> mine...Just 25 PP45 pairs. Another email and Ken promptly
> added another shipping option!
>
> This guy is awesome!
>
> While I was writing this, Ken wrote me again. There is
> nothing I can say to express how he care about his
> customers... I haven't even placed the order!!
> That is Customer Relation Management!!!
>
> NOTE: I am in no way affiliated with Ken, Powerwerx or any
> other company implicitly or explicitly mentioned on the
> message.

>
> --
> Paulo E.P. Marcondes
> PU2PIX
> pepm@osite.com.br

1499. FS: 4 Eimac 4-125A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 06:46:50 UTC
From: ethan <NOarficusSPAHM@yahoo.com>
Message-ID: <uBD7a.266378$tq4.5763@sccrnsc01>
Source record: 37352
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Not in original boxes, but these look unused. Clean, shiny bases, no discoloration
in the envelope. I can't test them, but I'll guaranty them not to be DOA.
Have a look at them at:
http://www.angelfire.com/linux/tubesnstuff/images/4125A1.jpg
http://www.angelfire.com/linux/tubesnstuff/images/4125A2.jpg
AES gets $132.00 each for these. I'll take $100/obo for all 4.

1500. CI-V interface voltages mysteriously doubled

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 07:02:03 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <874r6o51n8.fsf@jidanni.org>
Source record: 37353

Hi. I built the Icom CI-V interface http://www.g3vgr.co.uk/civ.htm so I could use http://parnass.com/tk2/ with my Icom R2.

Unfortunately communications are not proceeding. Perhaps the circuit produces too much voltage?

(For the R2 we use a stereo jack's middle and sleeve contacts, not the tip.) Positive voltage on the middle connector seen with the radio isolated from the circuit are, from the radio in "clone mode": 0.7 at rest, and 0.35 when transmitting as "clone master".

However, the circuit produces 1.4V at rest, and 0.7 when transmitting at 1200 baud. The radio must be right, so how did I end up sending twice the voltage I should towards to radio? What soldering flaw would do that this time, I say to myself. Though I've browsed on and on about this interface, all, I read about are "5V TTL levels". But anyway, the radio must be right.

Or, is the design working as intended, and perhaps I am cursed somehow because I use Linux? As for my RS232 port, at rest I find -10V on TxD, +10V on DTR, +10V on RTS. I am far away from parts stores, but have some old radios to pluck spare resistors if needed.

Anyways, for now the computer does not hear the data the radio sends out in 'clone out' mode, nor do I have proof that the radio reacts to the computer's commands. Help.
--
http://jidanni.org/ Taiwan(04)25854780

1501. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 10:56:05 UTC
From: bill.sloman@ieee.org
Message-ID: <7c584d27.0302280256.4b9205c3@posting.google.com>
Source record: 37354
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:<bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>...
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?

They may call it an auto-zero amplifier. Farnell lists a bunch of
integrated cirucit chopper amplifiers. The Linear Technology LTC1050
is listed as chopper stabilised CMOS operational amplifier, as are the
Maxim MAX422 and MAX430 and the Texas Instruments TI2652 and TI2654 as
well as the Intersil ICL7650.

Oddly enough, the National Semiconductor LMC2001 is not listed as
chopper-stabilised - it is, and very neatly - nor is the Analog
Devices AD8572 dual.

Bill Sloman, Nijmegen

1502. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 12:43:47 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e5f5838.4807364@news.freeserve.co.uk>
Source record: 37355

Well for anyone who has lost the thread or doesn't
fancy building one I've got an as new Maplin
Precision Gold GDO with all plug in coils
ï¿½25 plus postage (box is a bit tatty:))
from Ron.......

On Sat, 15 Feb 2003 20:34:23 -0500, kenneth scharf
<wa2mze@bellsouth.net> wrote:

>Here's and interresting grid dip circuit.
>Remember the Heath tunnel dipper? Well you probably can't
>find tunnel diodes anymore, but here is another way......
>
>http://www4.tpgi.com.au/users/ldbutler/NegResDipMeter.htm
>

1503. Re: Antenna for 2.4 Ghz wireless lan ... question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 13:44:52 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <oJJ7a.7443$hj.2040752@nnrp1.ptd.net>
Source record: 37356

Once again, the use of antennas with which Part 15 gear (e.g., 802.11)
has not been certified *as a system* by the FCC is a violation of FCC rules.

Under Part 97 (ham) rules, that constraint does not exist and other
antennas can be used ... but you can't operate under Part 97 and
connect to a Part 15 network like the university WLAN that the
original poster was talking about ...

Carl - wk3c

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e5e988c$0$131$edfadb0f@dtext02.news.tele.dk...
> Hello Jeff
>
> > desktop and be able to connect? The transmitting power of the card,
> > is 100 mW but with a high gain antenna, shouldn't I be able to get the
> > signal there? I have gone alot further with QRP type stuff but I am
> > pretty nieve at this frequency.
>
> You can find a lot of stuff about it here
>
> http://www.turnpoint.net/wireless/cantennahowto.html
>
> http://www.qsl.net/n9zia/wireless/page04.html
>
> http://www.trevormarshall.com/waveguides.htm
>
> http://www.saunalahti.fi/~elepal/antenna2.html
>
> http://guerrilla.net/reference/antennas/2ghz_collinear_omni_lowpwr/
>
> http://guerrilla.net/reference/antennas/2ghz_collinear_omni/
>
> http://www.seattlewireless.net/index.cgi/WirelessHardwareLinks
>
> Regards Max
>
>

1504. Re: Antenna for 2.4 Ghz wireless lan ... question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 17:19:46 UTC
From: larryc@northwest.com
Message-ID: <3E5F9A32.605C5CF3@northwest.com>
Source record: 37357

But such a notion does offer a nice business opportunity...and attendent
patents.

=========

"Carl R. Stevenson" wrote:

> Once again, the use of antennas with which Part 15 gear (e.g., 802.11)
> has not been certified *as a system* by the FCC is a violation of FCC rules.
>
> Under Part 97 (ham) rules, that constraint does not exist and other
> antennas can be used ... but you can't operate under Part 97 and
> connect to a Part 15 network like the university WLAN that the
> original poster was talking about ...
>
> Carl - wk3c
>
> "Max" <Max_Jens@post9.tele.dk> wrote in message
> news:3e5e988c$0$131$edfadb0f@dtext02.news.tele.dk...
> > Hello Jeff
> >
> > > desktop and be able to connect? The transmitting power of the card,
> > > is 100 mW but with a high gain antenna, shouldn't I be able to get the
> > > signal there? I have gone alot further with QRP type stuff but I am
> > > pretty nieve at this frequency.
> >
> > You can find a lot of stuff about it here
> >
> > http://www.turnpoint.net/wireless/cantennahowto.html
> >
> > http://www.qsl.net/n9zia/wireless/page04.html
> >
> > http://www.trevormarshall.com/waveguides.htm
> >
> > http://www.saunalahti.fi/~elepal/antenna2.html
> >
> > http://guerrilla.net/reference/antennas/2ghz_collinear_omni_lowpwr/
> >
> > http://guerrilla.net/reference/antennas/2ghz_collinear_omni/
> >
> > http://www.seattlewireless.net/index.cgi/WirelessHardwareLinks
> >
> > Regards Max
> >
> >

1505. Re: CI-V interface voltages mysteriously doubled

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 18:36:34 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <87y940p80d.fsf@jidanni.org>
Source record: 37358

Buying 47K resistors instead of 4K7 as clearly stated in
http://www.g3vgr.co.uk/civ.htm might be a factor, duh. Sorry. Never mind.
Maybe before asking next time, on my fancy debian Linux system I should do
$ apt-cache search circuit
gnucap - GNU Circuit Analysis package...
--
http://jidanni.org/ Taiwan(04)25854780

1506. Re: Still searching for Philips datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 19:44:40 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <OTygltLow7X+EwJ1@fslife.co.uk>
Source record: 37359

>I have the complete data, I'll do a scan and send a pdf later today if
>it is ok with you?
>
>Lasse SM5GLC
Received with thanks.

Exactly what I was after.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1507. Re: FS: 4 Eimac 4-125A

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 20:02:40 UTC
From: ethan <NOarficusSPAHM@yahoo.com>
Message-ID: <AfP7a.272531$iG3.31285@sccrnsc02>
Source record: 37360
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Sorry for the repost, but forgot to mention-
to reply, remove the NO and SPAHM
NOarficusSPAHM@yahoo.com

ethan <NOarficusSPAHM@yahoo.com> wrote in message news:uBD7a.266378$tq4.5763@sccrnsc01...
> Not in original boxes, but these look unused. Clean, shiny bases, no discoloration
> in the envelope. I can't test them, but I'll guaranty them not to be DOA.
> Have a look at them at:
> http://www.angelfire.com/linux/tubesnstuff/images/4125A1.jpg
> http://www.angelfire.com/linux/tubesnstuff/images/4125A2.jpg
> AES gets $132.00 each for these. I'll take $100/obo for all 4.
>
>
>
>

1508. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 20:54:41 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <mflu5vkjq74f7ca6cbisliap2gbr7v0umk@4ax.com>
Source record: 37362

On Fri, 28 Feb 2003 12:43:47 GMT, nospam_ronayling@hotmail.com (Ron)
opined thusly:

>
>Well for anyone who has lost the thread or doesn't
>fancy building one I've got an as new Maplin
>Precision Gold GDO with all plug in coils
>ï¿½25 plus postage (box is a bit tatty:))
>from Ron.......

I had no idea they sold one. Certainly not in any recent catalogue.
What's the frequency range of it? Is it analogue or digital read-out?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1509. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 21:34:09 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <b3ojm3$g26$1@newsg4.svr.pol.co.uk>
Source record: 37361
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0302262129.175ef251@posting.google.com...
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
[clip]
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

(There's a surprising number of video op-amps in DIP packages that will
directly amplify the R.F. side.)

From the DC POV, it's a bit pointless nowadays building a chopper amp (if
you insist, then the simplest is a '4066 as synchronous
modulator/demodulator :) when the likes of ICL7650 or OP177 are available .
Just amplify those diode voltages directly. But ... for good SWR's there's
still a big problem with diode AC to DC non-linearity at the bottom end of
the power range.
The linearising "compensator" circuit mentioned on the site is of only
little use with diode outputs below about 0.5VDC, as the compensator diode
'DC' comparison voltage is only a vague reflection of an actual input ACV
needed to give a particular diode DC output.
Good linearisation down to a mV or so, can be acheived using pairs of
matched (bench selected or IC packaged) diodes. One diode rectifying the
wanted RF. The other diode being fed with a variable AC voltage at say a few
hundred Hz. The DC outputs of both diodes are compared by a low offset
op-amp. This op-amp output then adjusts the low frequency signal voltage
level until DC balance is made.
As diodes are not really frequency sensitive, then for both to be giving out
(say) 1mVdc implies both are receiving maybe 100mVAC at their inputs. The
low frequency reference voltage can then be simply measured using normal
means such as a precision rectifier etc.
regards
john

1510. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 21:44:42 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e5fd630.37060389@news.freeserve.co.uk>
Source record: 37363

Its Analogue, never seen a digital one? wouldn't have thought
a digital readout would be of much use, can't really dip a digit hi!
Standard sort of format, coils plug in the top of a small box with
a tuning knob calibrated in bands representing the coil ranges
and a small meter, probably about 6 or 7 years old but virtually
unused, was used once for a company project and then demobbed
could send a pic..

On Fri, 28 Feb 2003 20:54:41 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Fri, 28 Feb 2003 12:43:47 GMT, nospam_ronayling@hotmail.com (Ron)
>opined thusly:
>
>>
>>Well for anyone who has lost the thread or doesn't
>>fancy building one I've got an as new Maplin
>>Precision Gold GDO with all plug in coils
>>ï¿½25 plus postage (box is a bit tatty:))
>>from Ron.......
>
>I had no idea they sold one. Certainly not in any recent catalogue.
>What's the frequency range of it? Is it analogue or digital read-out?

1511. Noise blanker schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 22:42:22 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5fe599$0$135$edfadb0f@dtext02.news.tele.dk>
Source record: 37364

Hello

I am looking for a schematic to a Tokyo HY-Power Noise Blanker
Unit type HNB-100 for a HT-106 transceiver.
Anyone out there that can help ?

Regards Max

1512. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 22:52:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0302281452.2a387274@posting.google.com>
Source record: 37365
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

What with all the chopper discussion here, I just have to jump in.

First of all, Jason, I think you should check out the RF log detectors mentioned by others; besides Analog Devices, I believe you'll find that folk like Linear Technology and Maxim make some. But AD has some that will detect both phase and magnitude, and you _could_ use that to monitor not just the SWR but the complex reflection coefficient. That could be much more useful that just SWR.

On choppers and signal levels: What do you want the chopper for, exactly? I can imagine wanting an amp with good DC characteristics following a diode detector, but surely not for RF amplification in this case. But even for amplifying the DC out of a good diode detector, you don't need chopper stabilization for 10 millivolts of RF input; that should get you on the order of a millivolt of DC out, into a high impedance. A lot of op amps have low enough initial offset to handle that, and a whole lot more are stable enough that they'd work with a simple offset null adjusted once a year or less. A bigger problem is that you're wanting to operate a diode detector over a range that spans linear and logarithmic output versus input. That is, at 10 millivolts, the output voltage will be very nearly proportional to input power (or to input volts-squared), but at 1 volt and above, the output will vary linearly with input voltage. You'll be much better off to scale the input to match one of the RF log detectors, which will have guaranteed performance and a relatively easy to deal with output scale factor. Otherwise, be prepared to do some careful calibration work.

I used a chopper-stabilized op amp about ten years ago in a sensitive field strength meter. I needed that for low offset voltage and in this case low input bias current. It can "see" down to about 30 microvolts of input. That's around a microvolt out of the detector. That's WAY less signal than you'll have, and is only useful with a selective tank on the input. The chopper-stabilized amp was much easier to deal with than the drifty CMOS amp in the prototype version of the FSM. The biggest problem I had with it was from leakage currents around the chopper feedback pin; I had nailed input leakages by carefully guarding the input trace, but discovered that high humidity would really mess things up in the chopper stabilization part of the ckt. This was with the Harris part that Win mentioned.

With ANY solid-state parts around high RF fields, beware of rectification that can introduce difficult-to-trace offsets and other errors. If you're looking for low DC offset in your amplifiers, do

NOT let RF get into the inputs (or the power supplies). In some
cases, even a few millivolts can screw things up.

Cheers,
Tom

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0302262129.175ef251@posting.google.com>...
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

1513. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-02-28 23:07:30 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <SYR7a.74995$zF6.5308375@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37366

I've gotten 40 e-mails about this receiver in the last couple of days, so I don't have time to check if you have a real e-mail account. If you would like the plans, that's ok, but please don't send me an e-mail, using either a phony account with a link, or an anti-spammed account. I had two of my e-mails returned to me. If those people would like the plans, please respond to me with a legitimate e-mail account.
Thanks!

Pete

Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote in message news:jYB7a.74106$zF6.5225078@bgtnsc04-news.ops.worldnet.att.net...
> There is no URL; folks have been e-mailing me directly, and I have been
> sending out the file. One thing, though. You need Adobe Acrobat Reader
> Version 5.0 to read and print the files. This is a free download from the
> Adobe site.
>
> Pete
>
> n9pt <nutmeg@w-link.net> wrote in message
> news:3E5EC9CD.AACE2BCF@w-link.net...
> > I'd like the URL to the radio info, please.
> >
> > Pete
> >
> > Pete KE9OA wrote:
> >
> > > I've gotten a few more inquiries about my general coverage receiver
> design,
> > > so to make things simpler, I have created a WinZipped bundle that
> contains
> > > schematics, parts placement diagrams, and PDF files of all of the
> boards.
> > > This way, artwork can be printed directly on Inkjet or Laserjet
> > > transparencies, giving a good tool to use with photosensitive boards.
> The
> > > zipped file is 350KB, and you do need Adobe Reader to view the
> schematics
> > > and board information. Interested parties can feel free to e-mail me
> > > directly, and I will be glad to send the file out to you. I know that
> some
> > > of the folks out in NG land have had a hard time reading some of the
GIF
> > > schematics that I had sent out, so all of you are welcome to shout me
> down!

> > > The next thing that I will be doing is adding another AGC loop ahead
of
> the
> > > 1st mixer; after this addition, the receiver should be able to handle
2
> or 3
> > > volts of RF, but that is still a few months away.
> > >
> > > Pete
> >
>
>

1514. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 00:09:37 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <8utv5v8go8a8a1530bkttths1dsnbt9brq@4ax.com>
Source record: 37368

On Fri, 28 Feb 2003 21:44:42 GMT, nospam_ronayling@hotmail.com (Ron)
opined thusly:

>
>Its Analogue, never seen a digital one? wouldn't have thought
>a digital readout would be of much use, can't really dip a digit hi!
>Standard sort of format, coils plug in the top of a small box with
>a tuning knob calibrated in bands representing the coil ranges
>and a small meter, probably about 6 or 7 years old but virtually
>unused, was used once for a company project and then demobbed
>could send a pic..

The frequency range, Ron; the frequency range is?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1515. source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 00:19:33 UTC
From: "H. Enquist" <henqvist@sympatico.ca>
Message-ID: <i%S7a.8151$kf7.1150252@news20.bellglobal.com>
Source record: 37367

Hi everyone,

I'm looking for a source for positive photo resist used for sensitizing
copper laminate boards.
I know sensitized boards are available but I want to sensitize and use my
existing material.
TIA
Harry VE3MAL

1516. Re: motorola msr 2000 vhf manual wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 02:31:41 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <hYU7a.109$zU2.167121@charlie.risq.qc.ca>
Source record: 37369

hi bruce,
CABINET: mod no ACC43KSBLL00AT1
S.NO 482PPC2015
RFW 30

Cartes: il y en a une qui s'appelle: R1 AUDIO,il y a d'�crit dessus
VOLUME,SQ,MIC
une autre :LINE DRIVER :LINE 1 output,LINE 2
output,TRN5235APR
une autre :STATION CONTROL MODUL :TRN5321APR
une autre: SQUELCH GATE: 64B83115L03 et ACTRN5324A

FM RECEIVER TYPE GRHA
SERIAL 482PPC2015

FM TX TYPE KSHA
P.O 30 WATTS
SERIAL 482PPC2015

hi bruce,

it is written in french but i think you will recoganyse the numbers.
it is clean like brand new.

thanks for your help,we all appreciate your help at my radio club,,little
one ,,,,8 members.

gervais fillion
bic,quebec
,ve2ckn

"Bruce Lane" <SpammersAreVermin@dev.nul> a �crit dans le message de news:
MPG.18c74e37eb681e74989792@192.168.42.131...
> In article <R0g7a.50296$LR3.4747477@charlie.risq.qc.ca>,
> gfillio1@globetrotter.net says...
>
> > hi all,
> > i am looking for manuals for a repeater my radio club baught.
> > we thaught that by buying it for a surplus goverment we would have
it,,,no
> > luck.
> > we are seeking help from the ham communauty.
> > any help will be appreciated
> >
> > she is vhf
>

> SHAMELESS PLUG ALERT!
>
> I'm a Motorola reseller that specializes in service to the amateur
> community. If you can give me the exact model number of the repeater,
> I'll see what I can find out for you.
>
> It will likely begin with 'C73,' and will have a whole string of
> other characters after it. Look on the side or edge of the cabinet for
> the model/serial plate, and either post a note here in the group or drop
> me an E-mail (your call).
>
> Thanks much.
>
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

1517. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 05:44:41 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <amg06vgefr3j707n167dfj84f7jom3hmqn@4ax.com>
Source record: 37370
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On 24 Feb 2003 00:20:48 GMT, Allodoxaphobia <nobody@frontier.net>
wrote:

>On Sun, 23 Feb 2003 21:09:44 GMT, Adam Adkins hath writ:
>> Recently I have been trying to use 1/2" CATV hardline to feed my
>> vertical antenna. The cable is a little larger diameter as LMR-400 or
>> any other .405 OD coax. It has a solid center conductor with foam
>> dialectric that is glued to the center conductor. The jacket is
>> aluminum, and there is no PVC outer jacket. The connector was crafted
>> from a PL-259 and a brass double female 1/2" compression fitting. That

That is the same thing I used with the 1/2 inch *stuff*.

>> experience has taught me a couple of things, and raised some questions.
>> If anyone has any helpful comments about the following, I would really
>> appreciate hearing them.
>>
>> I discovered very quickly how a kink in the cable is a disaster.
>> Thirty feet from the end of a 200 foot run, the cable kinked and the
>> outer metal jacket ruptured. Bleah. How disappointing.

The outer jacket is very thin on 1/2 inch.

>> Can anyone tell me good, cheap and durable ways to splice the
>> cable?

Two brass compression fittings and one UHF brass barrel connector.
You may (will) have to smooth down the threads to fit inside the
compression fittings. That's where having a lathe is nice, but a file
will do. Just make sure the finished surface is both smooth and
ROUND. You may have to add a bit of solder to the center conductors
of the 1/2 inch to get a tight fit inside the barell connector..

THEN, go down to your local electrical contracting store and pick up
some "flooded" heat shrink tubing. The stuff is a bit over one inch
inside diameter (unshrunk). It will shrink down tight on RG-8, so
it'll do the same with the connector and hard line.

The heat shrink tubing comes in four foot lengths at about $9 or so
"as I recall". Cut a piece long enough to extend about two to three
inches beyond the splice on each side. Slide this over one of the
pieces of coax *before* making the splice. After the splice is
completed, slide the heat shrink into place and then using a heat gun,
start at the middle and work out, shrinking the stuff tight enough to
see the shape of the connectors.

If done right you will see the flooding material (hot glue) squeeze
out both ends and all the way around. Just let it set...Don't stick
your finger in it as that stuff is *hot* and it won't let go. Please
don't ask how I know.<sigh>

>
>Can't help you there. I've only `slightly` kinked either the 1/2"
>or the 3/4" stuff but once each -- and it did not burst and I'm
>gonna live with it.
>
>> Talking to a friend, I mentioned that I didn't plan to bury the
>> cable but for a short run to make sure it isn't run over with the
>> tractor. He asked me, "Wouldn't that change the impedance?" I had to

As Jonsey said, nope!

>> admit that I don't know, but didn't think it would since the jacket is
>> ground anyway.
>
>Mox nix -- being ground. What you'll get is a smashed tube - with
>the outer wall much closer to the inner conductor - giving you
>(perhaps many - depending on how active the tractor) impedance `bumps`.
>
>[Oh, now that I've re-read the question: No, burying the hardline
> directly, or in-directly will *not* alter the impedance. sri]

It will if he doesn't bury it deep enough <:-))
One Tractor tire, or even car can make a big difference, particularly
if it's spinning..

>
>> I could not find the answer to this question anywhere. Can anyone
>> tell me whether buried / not buried will change the impedance of this
>> feed line? Are there advantages to burying the entire run? Are there
>> any wild aluminum eating creatures that nibble holes in hardline?
>
>Without _any_ poly jacket, you need to worry about electrolysis and/or
>the PH of the soil. If it were me: I'd bury it in some black poly pipe.
>'Twould be a feat to stuff in a looooooong run of it...

It's actually not all that bad...Use lots of wire pulling soap..The
ugly yellow stuff that comes in a pressurized can...sliperier than
snot on a door knob.

One person can do it, but it's safer (for the coax) if you can get two
of three. You need to get the pipe out straight, so it might have to
spend a day or two in the warm sun getting straightened a bit at a
time.

You need to be careful getting the coax out of the roll and
straightened before going into the pipe. It's real easy to pull a bit
too much coax while forgetting to watch the roll. As you've found,
that stuff kinks easily. That's where the extra help comes in handy.

>
>> Finally, does anyone care to share any hard-won experience, or
>> pointers to complete information, or whatever?
>
> http://www.jonz.net/W3DHJ/catvhardline.html
>

The only thing I'd change with the 3/4 inch is using brass compression fittings and UHF barrel connectors.
http://www.rogerhalstead.com/conn.htm Moisture is not usually a problem in the 3/4 inch as it can't migrate even if it does get in at the connector, so a good weather proofing of the connection should do the job. You can use adapters for N connectors.

>...but, none of my CATV HardLine comes even close to the ground.
>Out thru the basement window -- along the side of the house --
>and up inside of a 40' tower.

Good Luck,

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>HTH es 73,
>Jonesy

1518. Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 06:28:53 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <FqY7a.75467$zF6.5360348@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37371

I love to backpack my gear to the top of a hill overlooking my town, which makes a great DX spot. I run a Small Wonder Lab's SW-20 20m CW rig off of NiMH batteries and it works great. The antenna I use is an inverted vee dipole, with the center supported by a 20ft pushup. The hill is so steep in almost all directions that I seem to have a decent low angle of radiation, or at least low enough to get the job done (have worked lots of DX and had great signal reports).

Here's my question: I need a decent 40m antenna for the same hilltop (to use with my upcoming SW-40 and RockMite 40 kits). I can't string enough wire to make a 40m dipole work. I'd like to use a vertical, but my past experiences with verticals at low power have not been successful (but I've always had lousy ground and no radials). I have a hamstick and a magmount, but it is useless up there. Does anyone have an idea for a great 40m antenna that is lightweight (being light is important!) and easy to assemble that will get me heard? Preferably home-brew, as I'm not looking to spend a lot of money. Any weblinks on designs that work would be appreciated too.

Thanks,
Bert WF7I

1519. Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 06:32:47 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <juY7a.75476$zF6.5361263@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37372

I'm looking to start dabbling with building my own RF circuits and would like to get a bunch of this "copper clad" material that you can solder parts to for the "dirty" construction style. Where do you get this stuff typically? Is there a bargain-rate place somewhere to order, or is it pretty cheap normally? I've never seen any of it at "The Shack".

Thanks,
Bert WF7I

1520. Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 06:36:44 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <0yY7a.75480$zF6.5360811@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37373

OK, here's a final question. "The Shack" also does not stock torroids or RF chokes anymore (at least not that I can find). I'd like to have a grab bag of these and many other parts so that I can play at building various circuits for fun. Any suggestions of a decent supplier? Not looking to spend 100s of dollars, but would like to have a wide variety of parts on hand.

Thanks,
WF7I

1521. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 11:31:31 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <nS08a.5728$Uy4.472709@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37374

www.mouser.com

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:juY7a.75476$zF6.5361263@bgtnsc04-news.ops.worldnet.att.net...
> I'm looking to start dabbling with building my own RF circuits and would
> like to get a bunch of this "copper clad" material that you can solder
parts
> to for the "dirty" construction style. Where do you get this stuff
> typically? Is there a bargain-rate place somewhere to order, or is it
> pretty cheap normally? I've never seen any of it at "The Shack".
>
> Thanks,
> Bert WF7I
>
>

1522. Re: Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 11:33:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <iU08a.5729$Uy4.472927@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37375

http://www.amidon-inductive.com/index.html

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:0yY7a.75480$zF6.5360811@bgtnsc04-news.ops.worldnet.att.net...
> OK, here's a final question. "The Shack" also does not stock torroids or
RF
> chokes anymore (at least not that I can find). I'd like to have a grab
bag
> of these and many other parts so that I can play at building various
> circuits for fun. Any suggestions of a decent supplier? Not looking to
> spend 100s of dollars, but would like to have a wide variety of parts on
> hand.
>
> Thanks,
> WF7I
>
>

1523. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 14:03:15 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E60BDA4.C39808E8@cox.net>
Source record: 37376

The cheapest place I have found is Goldmine electronics.

http://www.goldmine-elec.com/

Search for the key words "copper clad" to see what they have.

- Dan, N7VE

Bert Herald wrote:
>
> I'm looking to start dabbling with building my own RF circuits and would
> like to get a bunch of this "copper clad" material that you can solder parts
> to for the "dirty" construction style. Where do you get this stuff
> typically? Is there a bargain-rate place somewhere to order, or is it
> pretty cheap normally? I've never seen any of it at "The Shack".
>
> Thanks,
> Bert WF7I

1524. Bert-WF7I/PC Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:10:17 UTC
From: Lou <tech@dp.net>
Message-ID: <b3qolj$201d$1@news.dp.net>
Source record: 37379

I have a few sections if interested. It is copper on both sides. I'm not sure of exact thickness at the moment, but I've used it to make many circuit boards with no problems. Can give more detail in e-mail.

--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
Checks must clear before shipping
"Dan Tayloe" <dtayloe@cox.net> wrote in message
news:3E60BDA4.C39808E8@cox.net...
> The cheapest place I have found is Goldmine electronics.
>
> http://www.goldmine-elec.com/
>
> Search for the key words "copper clad" to see what they have.
>
> - Dan, N7VE
>
> Bert Herald wrote:
> >
> > I'm looking to start dabbling with building my own RF circuits and would
> > like to get a bunch of this "copper clad" material that you can solder
parts
> > to for the "dirty" construction style. Where do you get this stuff
> > typically? Is there a bargain-rate place somewhere to order, or is it
> > pretty cheap normally? I've never seen any of it at "The Shack".
> >
> > Thanks,
> > Bert WF7I

1525. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:13:05 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v61jgpbav9av0b@corp.supernews.com>
Source record: 37377

I -have- seen it at the Shack, but the stuff they have is amazingly low quality. If by "dirty" you mean "Manhattan", their stuff just crumbles when you try to make pads.

I've found hamfests to be the best source. Although DigiKey, Mouser, and almost anyplace like that has the stuff, their prices are enough to put you off homebrewing. Someone here mentioned Goldmine Electronics, and I've heard that mentioned by others, but I haven't tried them. Seems like All Electronics also had copperclad at sensible prices, but again, I haven't tried them.

What I do is keep an eye out, then when I see something at a decent price, I buy up a few years' supply. Often scraps from places that make commercial boards are available almost free and are often quite nice sized. I often pick up pieces about 6 or 8 inches by 3 feet for about a buck, sometimes less. You can cut a fair number or boards out of that.

Of course, if you are going to Dayton, there will be plenty of suppliers. Far Circuits often has plenty of scrap pieces almost free and they always show up a Dayton.

The Arizona ScQRPions (http://www.extremezone.com/%7Enk7m/sqrppage.htm) has plenty of members near you, and they are mostly avid builders, so if there are good sources local to you, they would know.

..

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message news:juY7a.75476$zF6.5361263@bgtnsc04-news.ops.worldnet.att.net...
> I'm looking to start dabbling with building my own RF circuits and would
> like to get a bunch of this "copper clad" material that you can solder parts
> to for the "dirty" construction style. Where do you get this stuff
> typically? Is there a bargain-rate place somewhere to order, or is it
> pretty cheap normally? I've never seen any of it at "The Shack".
>
> Thanks,
> Bert WF7I
>
>

1526. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:22:18 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0303010722.3e7ee743@posting.google.com>
Source record: 37378

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:<juY7a.75476$zF6.5361263@bgtnsc04-news.ops.worldnet.att.net>...
> I'm looking to start dabbling with building my own RF circuits and would
> like to get a bunch of this "copper clad" material that you can solder parts
> to for the "dirty" construction style. Where do you get this stuff
> typically? Is there a bargain-rate place somewhere to order, or is it
> pretty cheap normally? I've never seen any of it at "The Shack".
>
> Thanks,
> Bert WF7I

https://server108.hypermart.net/nelniech/nelniech/pcboard.html

this is the page with the board, click on link at bottom of page to
get to main page of this outfit. or just go here.....

https://server108.hypermart.net/nelniech/nelniech/nelniech.html

cheaper than mouser but the board is of lower quality, mouser sells
fr-4 I believe and this is probably not as good but its good for a
beginner. You can buy some big pieces here too if you have access to a
shear or can cut it well with a saw or scoring tool.

1527. Re: Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:30:01 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v61mnbta0th162@corp.supernews.com>
Source record: 37383

Dan's Small Parts and Kits (http://www.danssmallpartsandkits.net/) often has collections of popular sizes and mixes. However, he only does business by snail mail so expect at least a two week wait.

W8DIZ (http://kitsandparts.com) has very good prices on popular mixes, but he doesn't always offer collections of various mixes. However, I suspect if you sent him an email he could be talked into it. Even so, for twenty bucks, you could have a several years' supply of the more popular mixes from him so you might think that way. Amidon and Palomar Engineers both have all the sizes and mixes, but their shipping is high enough that it's worth just buying handfuls from Diz unless you need a lot of odd mixes. I would suggest that T50-6, T50-2 and FT50-43 would cover 90%+ of what you need unless you are really into miniaturization and want smaller stuff, or are building high power equipment and need larger stuff, or are really into 160 or VHF and want odd mixes. The only other popular mixes for ham work are -7 which has a slightly better temperature coefficient than -6 and so is used for VFOs, -1 which helps reduce the number of turns you need on 80/160, and -10 which increases the turns you need (and thus your control of the inductance) on 10. Plus, the type 61 ferrite which is used sometimes in transformers (although 90% of the time people use type 43 ferrite).

..

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:0yY7a.75480$zF6.5360811@bgtnsc04-news.ops.worldnet.att.net...
> OK, here's a final question. "The Shack" also does not stock torroids or
RF
> chokes anymore (at least not that I can find). I'd like to have a grab
bag
> of these and many other parts so that I can play at building various
> circuits for fun. Any suggestions of a decent supplier? Not looking to
> spend 100s of dollars, but would like to have a wide variety of parts on
> hand.
>
> Thanks,
> WF7I
>
>

1528. Re: CI-V interface voltages mysteriously doubled

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:43:48 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v61mncc4oq7063@corp.supernews.com>
Source record: 37381

The CI-V interface uses an open collector bus, so the voltages with the radio disconnected from the circuit are not really relevant. I'm actually surprised that 47K didn't work, but it is way higher than I would use. With only one radio, you probably could go down to 470 ohm or lower, but that would prevent more devices from being connected in parallel (assuming that they all had internal pullups, sounds like your R2 doesn't have an internal pullup).

Each transmitter on the CI-V bus sinks current to drag the bus voltage down to a TTL "false" level. Somebody on the bus needs to pull the bus up to a TTL "true" level when nobody is talking. Most open collector devices can sink a healthy amount of current so the size of the pullup resistors is pretty non-critical unless you have a lot of devices working in parallel. 4.7K is light enough you probably could put a bunch of devices on the bus. Personally, I'd probably go a little lower if I knew I was only going to use one radio. With a little more current there would be a little better noise immunity, but probably not enough different that you'd notice, and you would be asking the radio to sink a little more current, which would heat things up a little more in the tiny radio.

..

"Dan Jacobson" <jidanni@dman.ddts.net> wrote in message
news:87y940p80d.fsf@jidanni.org...
> Buying 47K resistors instead of 4K7 as clearly stated in
> http://www.g3vgr.co.uk/civ.htm might be a factor, duh. Sorry. Never mind.
> Maybe before asking next time, on my fancy debian Linux system I should do
> $ apt-cache search circuit
> gnucap - GNU Circuit Analysis package...
> --
> http://jidanni.org/ Taiwan(04)25854780

1529. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:54:13 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e60d5a0.14870543@news.freeserve.co.uk>
Source record: 37380

Do they really! well just shows how long I've been out
of it hi!! fancy having a digital readout of the freq I
wouldn't have thought it worth it, after all a GDO reading
is a very broad sort of measurement! affected by all sorts
of things.. when I needed to know where it was roughly
I just held it near my counter..
But sadly no, no sort of digital readout at all on this box!
pure utility :)
Without struggling up into the loft I suppose it covers from
a few mhz up to about 200mhz over about 6 plug in coils

On Sat, 01 Mar 2003 00:09:37 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Fri, 28 Feb 2003 21:44:42 GMT, nospam_ronayling@hotmail.com (Ron)
>opined thusly:
>
>>
>>Its Analogue, never seen a digital one? wouldn't have thought
>>a digital readout would be of much use, can't really dip a digit hi!
>>Standard sort of format, coils plug in the top of a small box with
>>a tuning knob calibrated in bands representing the coil ranges
>>and a small meter, probably about 6 or 7 years old but virtually
>>unused, was used once for a company project and then demobbed
>>could send a pic..
>
>The frequency range, Ron; the frequency range is?

1530. Re: Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 15:58:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v61mncnf1e9j64@corp.supernews.com>
Source record: 37382

I fixated on the toroids and missed the "chokes and other RF toys" part.

DigiKey has a good selection of inductors and chokes at sensible prices. I keep few of them in the parts drawer, however, preferring to make what I need from toroids rather than stocking a wide range of values.

DigiKey also has a few synthesizer, prescaler and other RF chips, but in general, there supply of RF parts is pretty weak. I like them, though, because their service is astonishing.

Dan's has a changing supply of almost anything the homebrewer needs. Usually, if he has it, the price will be very good, but you can't count on him having anything.

RF Parts has a good selection of, well, RF Parts. If you need an actual RF transistor for a final or something, they are about the only place to go. Unfortunately, their prices reflect that. They used to be the only place for dipped silver mica caps, but now DigiKey carries them.

I often find useful things at good prices from places like B.G. Micro or Mendelsohn's. Both of these places have inventories that change with the wind, and prices that may be very good, or not, so you need to know what you are looking for. B.G. often has a good selection of MOSFETs that can be used in finals at very good prices. Also, they usually have some sort of a deal on LCD displays. But you need to know what you are looking at. For example, their prices on crystals are typically almost twice DigiKey's.

..

1531. Re: srfe1057 transistor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 17:38:15 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <be68a.8205$WI3.813209@newsread1.prod.itd.earthlink.net>
Source record: 37384

SRF is the Motorola designation for PROPRIETARY devices.
You will NOT get any specs. from them.

zindazenda <zen@lineisp.co.uk> wrote in message
news:1046393808.363092@auth2.dns.griffin.net.uk...
> anyone got specs on above tr...
> thanks simon g0zen
>
>

1532. Re: Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 17:49:27 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933163F0389A7pookster@216.168.3.50>
Source record: 37385

"Bert Herald" <bert.herald@worldnet.att.net> wrote in news:FqY7a.75467
$zF6.5360348@bgtnsc04-news.ops.worldnet.att.net:

> Here's my question: I need a decent 40m antenna for the same hilltop (to
> use with my upcoming SW-40 and RockMite 40 kits).

Go to: http://www.btinternet.com/~g4fgq.regp/page3.html
and download TRAPDIP. This program will help you add a loading coil in
each side of your 20 meter dipole for 40m.

--
Bill, W7TI

1533. Re: Mac software availability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 17:53:51 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <cYecnX6Oka_on_yjXTWcoA@ctc.net>
Source record: 37387

> 1. Besides qrz.com, what are other available sites for Mac shareware?
> 2. I assume one cannot download Mac software to a PC machine, even with a
an
> Apple formatted disk in the PC floppy drive. Am I correct?
>
OUtside of maybe a few special cases you can not use Apple (MAC) softwear on
a PC or the other way around either.

1534. Mac software availability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 18:38:58 UTC
From: fazamy@aol.com
Message-ID: <20030301133858.13805.00000318@mb-cc.aol.com>
Source record: 37386

Recently, I've come into the possession of a Mac.
1. Besides qrz.com, what are other available sites for Mac shareware?
2. I assume one cannot download Mac software to a PC machine, even with a an Apple formatted disk in the PC floppy drive. Am I correct?

Thanks,
Evan
KB2AMY

1535. Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 20:08:05 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303011208.4bb127c9@posting.google.com>
Source record: 37388
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I would particularly like to hear what Reg, Roy, and Doc have to say.

I'm working on a super SWR/wattmeter for a graduate school project. Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide good resolution only at low SWR levels? The reflection co-efficient (reflected voltage divided by forward voltage) is .5 at an SWR of 3. But for all of the SWR meters I have seen (including my cross-needle MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past it. In fact, the middle of the scale is usually an SWR of more like 2. But a transmitter SWR under 2 is good enough. Does it really matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it would help to know if you are tuning in the right direction. On my SWR meter, it's hard to tell the difference between an SWR of 5 and an SWR of infinity. I would rather have the good resolution at high SWR levels, and that is the inspiration for my project. I may seem strange to you, but I would like to know if I have lowered my SWR from 15 to 10. At least I would know I'm going in the right direction, and I would know if I passed up the low SWR point.

An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2 corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should be as easy as showing an SWR of 2, but an SWR of 5 is usually portrayed as a hair away from infinity. An SWR of 1.5 corresponds to a reflection ratio of .2 while an SWR of 9 corresponds to a reflection ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable, while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2 corresponds to a reflection ratio of .09, and an SWR of 21 corresponds to a reflection ratio of .91.

So why do SWR meter designs have to be skewed so greatly?

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

1536. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 20:08:40 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <nf2dnQTrHaSOv_yjXTWcqQ@ctc.net>
Source record: 37392
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> I'm working on a super SWR/wattmeter for a graduate school project.
> Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> good resolution only at low SWR levels? The reflection co-efficient
> (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> But for all of the SWR meters I have seen (including my cross-needle
> MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> it. In fact, the middle of the scale is usually an SWR of more like
> 2. But a transmitter SWR under 2 is good enough. Does it really
> matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it

Most simple swr (wattmeters) use components that work on a log function. The diodes in them function mainly in the so called square log area of voltage/power. If you look at the scales of many analog meters any that are not measuring power or resistance do not have linear scales simply because it is easy and cheaper to make them that way. ONe other thing is that when the SWR geto over 2 or 3 to 1 then it is high enough to do something about.

1537. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 20:25:22 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E611732.3070601@bellsouth.net>
Source record: 37389

cornytheclown wrote:
> "Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:<juY7a.75476$zF6.5361263@bgtnsc04-news.ops.worldnet.att.net>...
>
>>I'm looking to start dabbling with building my own RF circuits and would
>>like to get a bunch of this "copper clad" material that you can solder parts
>>to for the "dirty" construction style. Where do you get this stuff
>>typically? Is there a bargain-rate place somewhere to order, or is it
>>pretty cheap normally? I've never seen any of it at "The Shack".
>>
>>Thanks,
>>Bert WF7I
>
>
> https://server108.hypermart.net/nelniech/nelniech/pcboard.html
>
> this is the page with the board, click on link at bottom of page to
> get to main page of this outfit. or just go here.......
>
> https://server108.hypermart.net/nelniech/nelniech/nelniech.html
>
> cheaper than mouser but the board is of lower quality, mouser sells
> fr-4 I believe and this is probably not as good but its good for a
> beginner. You can buy some big pieces here too if you have access to a
> shear or can cut it well with a saw or scoring tool.

I have found 2'x3' pieces of double clad at hamfests for just a few
bucks each.
Old pieces may be very brown (or even green) from oxidation but this
will clean
off with a little Ajax and steel wool.

1538. Re: Grid dip meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 20:31:28 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <ft426vsaukv1ui387utloclt9ahgqukq4r@4ax.com>
Source record: 37390

On Sat, 01 Mar 2003 15:54:13 GMT, nospam_ronayling@hotmail.com (Ron)
opined thusly:

>
>Do they really! well just shows how long I've been out
>of it hi!! fancy having a digital readout of the freq I
>wouldn't have thought it worth it, after all a GDO reading
>is a very broad sort of measurement! affected by all sorts
>of things.. when I needed to know where it was roughly
>I just held it near my counter..
>But sadly no, no sort of digital readout at all on this box!
>pure utility :)
>Without struggling up into the loft I suppose it covers from
>a few mhz up to about 200mhz over about 6 plug in coils

Okay, Ron. Obviously the *dip* metering is shown by an analogies
meter; it's only the frequency of the oscillator that's shown
digitally. Provided this display shows a sample of that, sniffed from
the output stage of the oscillator, it's an accurate reflection of
precisely what frequency the dip is taking place at and extraneous
factors that can 'pull' the oscillator won't be a problem. Analogue
dial read-outs can't compete with that degree of accuracy, obviously.
They're merely an approximately-linked representation.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1539. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 21:03:56 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e612004$0$148$edfadb0f@dtext02.news.tele.dk>
Source record: 37391

Hello

> >>I'm looking to start dabbling with building my own RF circuits and would
> >>like to get a bunch of this "copper clad" material that you can solder
parts
> >>to for the "dirty" construction style. Where do you get this stuff
> >>typically? Is there a bargain-rate place somewhere to order, or is it
> >>pretty cheap normally? I've never seen any of it at "The Shack".

Do as I do, take the phonebook and look up the compagnys near to you
that makes PCB boards, and then go hunting in their garbage container.
I collected several kilo's of materials that way, and for free :)

Regards Max

1540. What is zero beat?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 21:31:32 UTC
From: Francois <fproulx@NOSPAMvideotron.ca>
Message-ID: <xI98a.85888$3b.1410810@wagner.videotron.net>
Source record: 37394

Hi,

I would like to know how to check the frequency of my ic-730 receiver.
I have a mfj antenna analyzer and a frequency counter. I read somewere that
it is pretty easy using the zero beat technique, but I wonder how we do it.
In what mode does the receiver should be set? When do we know that we are on
the right frequency?

Thanks a lot for any help,

Francois,
ve2tta

1541. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 21:31:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6126C5.8070100@ieee.org>
Source record: 37393
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason Hsu wrote:
> So why do SWR meter designs have to be skewed so greatly?

SWR's around 1:1 are most interesting to the most people.
If you want something else, install a microcontroller to
do the math for you and drive a digital display with it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1542. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 22:29:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i6d26vgqj0vj7up6eddh691q4tsl6ls0ic@4ax.com>
Source record: 37395
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 1 Mar 2003 12:08:05 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>
>So why do SWR meter designs have to be skewed so greatly?
>
>Jason Hsu, AG4DG

Hi Jason,

Why? Because it is both easy and reveals the region of most interest
to the average user.

Want to change that? Add another diode across the meter's leads.

73's
Richard Clark, KB7QHC

1543. Re: CI-V interface voltages mysteriously doubled

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 23:16:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <8Tb5dxHd9TY+EAmV@ifwtech.co.uk>
Source record: 37396

xpyttl wrote:
>The CI-V interface uses an open collector bus, so the voltages with the
>radio disconnected from the circuit are not really relevant. I'm actually
>surprised that 47K didn't work, but it is way higher than I would use. With
>only one radio, you probably could go down to 470 ohm or lower, but that
>would prevent more devices from being connected in parallel (assuming that
>they all had internal pullups, sounds like your R2 doesn't have an internal
>pullup).
>
>Each transmitter on the CI-V bus sinks current to drag the bus voltage down
>to a TTL "false" level. Somebody on the bus needs to pull the bus up to a
>TTL "true" level when nobody is talking. Most open collector devices can
>sink a healthy amount of current so the size of the pullup resistors is
>pretty non-critical unless you have a lot of devices working in parallel.
>4.7K is light enough you probably could put a bunch of devices on the bus.
>Personally, I'd probably go a little lower if I knew I was only going to use
>one radio. With a little more current there would be a little better noise
>immunity, but probably not enough different that you'd notice, and you would
>be asking the radio to sink a little more current, which would heat things
>up a little more in the tiny radio.

Some Icom radios such as the 746 won't give a good logic "high/true"
into a load as low as 4.7k plus the base-emitter drop of the receiving
transistor. It may be necessary to increase that base resistor to say
22k or more, and perhaps to use a higher-gain transistor.

I found that out using Ekki Plicht's 'CI-V Commander' software, which is
excellent for trouble-shooting and monitoring activity on the bus...
though it only works under Windows:
http://www.qsl.net/civ_commander/

>"Dan Jacobson" <jidanni@dman.ddts.net> wrote in message
>news:87y940p80d.fsf@jidanni.org...
>> Buying 47K resistors instead of 4K7 as clearly stated in
>> http://www.g3vgr.co.uk/civ.htm might be a factor, duh. Sorry. Never mind.
>> Maybe before asking next time, on my fancy debian Linux system I should do
>> $ apt-cache search circuit
>> gnucap - GNU Circuit Analysis package...
>> --
>> http://jidanni.org/ Taiwan(04)25854780
>
>

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)

Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1544. Re: What is zero beat?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 23:31:37 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b3rft6bus1@slb5.atl.mindspring.net>
Source record: 37447

Zero beat is when the receiver is tuned exactly dead center of the received CARRIER.

Find yourself a carrier. Say from your 'calibrator'. It should show up every 100kc or some of them do it every 25.

Turn your VFO slowly across the carrier. You will note that the frequency will slowly change. If you tune it very slowly you will find a place that the tone goes lower and lower until you can hear only a very low frequency tone...then nothing. And as you continue to tune the tone will begin to rise again.

Zero Beat is when you hear the lowest tone.

This can be done in either SSB or CW mode. It will not work in AM or FM modes.

Dan/W4NTI

"Francois" <fproulx@NOSPAMvideotron.ca> wrote in message news:xI98a.85888$3b.1410810@wagner.videotron.net...
> Hi,
>
> I would like to know how to check the frequency of my ic-730 receiver.
> I have a mfj antenna analyzer and a frequency counter. I read somewere that
> it is pretty easy using the zero beat technique, but I wonder how we do it.
> In what mode does the receiver should be set? When do we know that we are on
> the right frequency?
>
> Thanks a lot for any help,
>
> Francois,
> ve2tta
>
>

1545. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-01 23:47:43 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <zEb8a.76642$zF6.5454417@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37448

I've gotten so many replies that I can't keep up with the mail, so I have created a website at http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html I have been able to put photos of some of the units I have built, but I haven't yet figured out how to upload the PDF files. If anybody has any ideas, that would be great! Let me know what you think.

Pete

Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote in message news:SYR7a.74995$zF6.5308375@bgtnsc04-news.ops.worldnet.att.net...
> I've gotten 40 e-mails about this receiver in the last couple of days, so I
> don't have time to check if you have a real e-mail account. If you would
> like the plans, that's ok, but please don't send me an e-mail, using either
> a phony account with a link, or an anti-spammed account. I had two of my
> e-mails returned to me. If those people would like the plans, please
> respond to me with a legitimate e-mail account.
> Thanks!
>
> Pete
>
> Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote in message
> news:jYB7a.74106$zF6.5225078@bgtnsc04-news.ops.worldnet.att.net...
> > There is no URL; folks have been e-mailing me directly, and I have been
> > sending out the file. One thing, though. You need Adobe Acrobat Reader
> > Version 5.0 to read and print the files. This is a free download from the
> > Adobe site.
> >
> > Pete
> >
> > n9pt <nutmeg@w-link.net> wrote in message
> > news:3E5EC9CD.AACE2BCF@w-link.net...
> > > I'd like the URL to the radio info, please.
> > >
> > > Pete
> > >
> > > Pete KE9OA wrote:
> > >
> > > > I've gotten a few more inquiries about my general coverage receiver
> > design,
> > > > so to make things simpler, I have created a WinZipped bundle that
> > contains

> > > > schematics, parts placement diagrams, and PDF files of all of the
> > boards.
> > > > This way, artwork can be printed directly on Inkjet or Laserjet
> > > > transparencies, giving a good tool to use with photosensitive
boards.
> > The
> > > > zipped file is 350KB, and you do need Adobe Reader to view the
> > schematics
> > > > and board information. Interested parties can feel free to e-mail
me
> > > > directly, and I will be glad to send the file out to you. I know
that
> > some
> > > > of the folks out in NG land have had a hard time reading some of the
> GIF
> > > > schematics that I had sent out, so all of you are welcome to shout
me
> > down!
> > > > The next thing that I will be doing is adding another AGC loop ahead
> of
> > the
> > > > 1st mixer; after this addition, the receiver should be able to
handle
> 2
> > or 3
> > > > volts of RF, but that is still a few months away.
> > > >
> > > > Pete
> > >
> >
> >
>
>

1546. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 00:08:38 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E614B86.18E4F7E8@cwis.net>
Source record: 37449
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason,
The usual SWR meter scale is not linear at all (but logarithmic). And, as Cecil said, most people don't care it they can distinguish between a 5:1 and a 20:1, they would rather see what is happening at the other end of the scale. Personally, knowing if I have an SWR between 10:1 and infinity doesn't interest me as much as 'where' the SWR is between 1:1 and 5:1. Once it gets over 5:1, I figure I'm in the wrong 'ball park' anyway. Of course, if you want to, you could always recalibrate the meter's scale for the high end, but how often would you use it?
'Doc

1547. Re: srfe1057 transistor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 00:16:20 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046564182.218296@auth2.dns.griffin.net.uk>
Source record: 37450

yes i know!!
but does anybody out there have the specs on this device..or even what radio
was it in...28v 12v?? etc.
thanks simon g0zen
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1046393808.363092@auth2.dns.griffin.net.uk...
> anyone got specs on above tr...
> thanks simon g0zen
>
>

1548. Re: What is zero beat?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 00:35:10 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v62kfmrmp9bl7e@corp.supernews.com>
Source record: 37451

The problem, of course, is that your rig's IF probably whacks out anything below 100 Hz or so. This makes it really hard to hear zero beat.

HOWEVER, your Icom probably has a CW-R mode. Tune the carrier that Dan mentions as if you were tuning a CW signal, and switch between CW and CW-R mode. When the 2 sides have the same tone, you are "zero beat". It's not too hard to get within about 5 Hz or so this way. Trying to actually hear the zero beat will be tough within a hundred Hz or so. Keep in mind that your IF wants to pass only the part of the signal responsible for intelligence, so for SSB this is about 300 Hz to 3 KHz and for CW, about 300 to 800 Hz. Obviously, you may have installed filters to make this narrower.

A caution about using CW mode to try to zero beat. When you are using CW mode, your radio will indicate the carrier frequency when you hear a tone of 600-800 Hz, depending on your radio. At zero beat, the indicated frequency will be that far off.

Unless your radio has an audio chain that takes out low frequencies (common if the radio can receive FM as well as CW/SSB), it's easy to hear the difference between 2 carriers. If you are comparing a signal generator to, say, WWV you should be able to hear a low frequency thumping as you get close to zero beat. This is especially effective in AM mode.

With an all mode radio, however, the audio often chops low frequencies so you aren't bothered by the PL tone on an FM signal. This is why this doesn't work if you have a radio that can receive FM.

..

"Francois" <fproulx@NOSPAMvideotron.ca> wrote in message
news:xI98a.85888$3b.1410810@wagner.videotron.net...
> Hi,
>
> I would like to know how to check the frequency of my ic-730 receiver.
> I have a mfj antenna analyzer and a frequency counter. I read somewere
that
> it is pretty easy using the zero beat technique, but I wonder how we do
it.
> In what mode does the receiver should be set? When do we know that we are
on
> the right frequency?
>
> Thanks a lot for any help,
>
> Francois,
> ve2tta

>
>

1549. Re: What is zero beat?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 00:46:24 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E615460.22466544@ieee.org>
Source record: 37452

Dan/W4NTI wrote:

> Zero beat is when the receiver is tuned exactly dead center of the received
> CARRIER.
>
> Find yourself a carrier. Say from your 'calibrator'. It should show up
> every 100kc or some of them do it every 25.
>
> Turn your VFO slowly across the carrier. You will note that the frequency
> will slowly change. If you tune it very slowly you will find a place that
> the tone goes lower and lower until you can hear only a very low frequency
> tone...then nothing. And as you continue to tune the tone will begin to
> rise again.
>
> Zero Beat is when you hear the lowest tone.
>
> This can be done in either SSB or CW mode. It will not work in AM or FM
> modes.
>
> Dan/W4NTI

Don't forget that many radios shift frequency about 800 Hz when going from
SSB to CW.

Bill K7NOM

1550. Re: Mac software availability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 01:07:46 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <CPc8a.642362$HG.118924448@news4.srv.hcvlny.cv.net>
Source record: 37453

Hi,

A lot depends on what kind of Mac you have. They have been through several generations of machines and operating systems. More or less there are:

1) Machines made back in the 1980's based on early Motorola CPU's
2) Machines made in the 1990's based on more modern CPU's
3) Stuff made in the last few years

In addition to the hardware changes there are ten different operating system revisions for the Mac. The oldest machines had their own stuff and when the newer machines came out the operating system changed a lot. Software written for the new machines and operating systems will in general not run on the older 1980's machines.

Recently they came out with a whole new operating system called OS-X. It will only run well on a fairly new machine. Again same problem - software written specifically for the new machine will not run under the old operating system(s) on the old machine(s).

What to do .....

If it's a fairly new machine then consider upgrading it to the latest operating system and start downloading software. There's a ton of it out there.

If it's an older machine then it's probably not worth upgrading.

Take Care!

Bob Camp
KB8TQ

"FAZAMY" <fazamy@aol.com> wrote in message
news:20030301133858.13805.00000318@mb-cc.aol.com...
> Recently, I've come into the possession of a Mac.
> 1. Besides qrz.com, what are other available sites for Mac shareware?
> 2. I assume one cannot download Mac software to a PC machine, even with a
an
> Apple formatted disk in the PC floppy drive. Am I correct?
>
> Thanks,
> Evan
> KB2AMY

1551. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 02:51:37 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <74s26vss48a4grpdm15sle7iidnf6akc2t@4ax.com>
Source record: 37454

On Sat, 01 Mar 2003 23:47:43 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>I've gotten so many replies that I can't keep up with the mail, so I have
>created a website at
>http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html I
>have been able to put photos of some of the units I have built, but I
>haven't yet figured out how to upload the PDF files. If anybody has any
>ideas, that would be great! Let me know what you think.
>
>Pete
>

Hi Pete,

I went to the web site, but only one of the four files would download.
I got the zip file, but got a WorldNet error page from the other
three. Since it looks like everything is in the zip file, I should be
ok, but you might want to delete the other three links to avoid
further confusion.

Thanks,

Bob McConnell
N2SPP

1552. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 04:02:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3rvnv$s2n$1@knossos.btinternet.com>
Source record: 37455
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> So why do SWR meter designs have to be skewed so greatly?
> Jason Hsu, AG4DG

==========

Jason,

There's a strict mathematical relationship between the output voltage of a so-called SWR bridge, the linear meter deflection of a moving coil meter, and the SWR which causes it.

So there's nothing anybody can do about how the meter scale is graduated such that the needle indicates an SWR between 1 and infinity.

If you should feel the need for more sensible, meaningful, graduations then erase all thoughts from your mind about SWR and calibrate the scale LINEARLY from 0-to-1 (full scale deflection) in terms of "Magnitude of the Reflection Coefficient".

Actually, there's no such thing as an SWR meter. The name is a misnomer. In most situations there isn't even a transmission line to measure it on.

Of course, the little box between transmitter and tuner does perform a valuable function. But a far more appropriate name is TLI = "Transmitter Loading Indicator". And it needs no scale graduations.

That you have already discovered little useful meaning can be attached to indicated SWR values (eg., the difference between 9 and 11) is itself sufficient evidence of no need for scale markings.

The magnitude of the reflection coefficient is not of much use either. Nothing can be calculated from it because phase information has been willfully discarded.

Green (good) and red (bad) bands would make a colorful finishing touch for your project.

In view of your description "super" power meter you should be warned that the most inaccurate procedure in RF engineering is the measurement of power. Consider it essential to check accuracy by making entirely independent measurements of the power dissipated in say a 500-ohm load on the antenna side a 50-to-500 ohm ATU.

You may find program SWRMETER of interest.

==========
Regards from Reg, G4FGQ

For Free Radio Design Software
go to http://www.g4fgq.com
==========

1553. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 04:47:05 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <d1g8a.76994$zF6.5484170@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37456

I did fix those bogus links, and added a couple of others, including a mini-tutorial on PLLs and an active multiband loopstick antenna design. I will be adding a few other things, as time goes on. I would like to upload my redesign of Marshall Leach's high performance stereo preamp, but I need to get his permission first. About that zip file.....I have updated it. You will notice that the bandwidths of the filters on the Rx board were not shown. That has been corrected. Also, the 30MHz reference frequency for the DDS and the 4MHz frequency of the PIC's clock crystal were not shown. This has also been corrected on the new zip file. All others that have e-mailed me, and gotten the old zip file, can now go to http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html This is my new website, and has all of the updated files. Thanks for the bandwidth, folks. If you do go to my website and you have questions, feel free to give me a shout!

Pete

Bob McConnell <rmcconne.NOSPAM@lightlink.com> wrote in message news:74s26vss48a4grpdm15sle7iidnf6akc2t@4ax.com...
> On Sat, 01 Mar 2003 23:47:43 GMT, "Pete KE9OA"
> <n.gianakopoulos@worldnet.att.net> wrote:
>
> >I've gotten so many replies that I can't keep up with the mail, so I have
> >created a website at
> >http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html I
> >have been able to put photos of some of the units I have built, but I
> >haven't yet figured out how to upload the PDF files. If anybody has any
> >ideas, that would be great! Let me know what you think.
> >
> >Pete
> >
>
> Hi Pete,
>
> I went to the web site, but only one of the four files would download.
> I got the zip file, but got a WorldNet error page from the other
> three. Since it looks like everything is in the zip file, I should be
> ok, but you might want to delete the other three links to avoid
> further confusion.
>
> Thanks,
>
> Bob McConnell
> N2SPP
>

1554. [FA] microwave goodies - 1.7-2.0GHz VCOs, low price

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 13:26:51 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0303020526.11a1070c@posting.google.com>
Source record: 37457

VCO 1.7 to 2.0 GHz 10 pcs voltage controlled

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7286&item=2512754361&rd=1

1555. Re: mixer and tank question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 15:08:18 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <C7p8a.96116$P1.6264750@news1.east.cox.net>
Source record: 37458

3 dB increase in noise figure, and big time image problems.

Peter

"Jan Wagner" <jwagner@cc.hut.fi> wrote in message
news:b1jch5smd1@nyytiset.pp.htv.fi...
> Hi,
>
> if I place a tuned tank on the output of a mixer (down conversion to
> IF), will it be reflected back to RF as a tank tuned to LO+IF?
>
> Just thinking whether or not the antenna tank could be left out... ;-)
>
> thanks,
>
> - Jan
>
>
>
>

1556. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 15:21:48 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b3t7i9$1p3brs$1@ID-175933.news.dfncis.de>
Source record: 37459
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The meter scale may favor *indications* of low VSWR for the reasons already posted -- but that doesn't mean they can be believed.

The directivity of the RF coupler used to drive the metering circuits often is not better than about 26dB, which limits fairly accurate "VSWR" measurements to about 1.4:1 (and progressively more inaccurate at lower indicated VSWRs).

RF

1557. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 15:46:33 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0303020746.5018cd5c@posting.google.com>
Source record: 37460

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:<3e612004$0$148$edfadb0f@dtext02.news.tele.dk>...
> Hello
>
> > >>I'm looking to start dabbling with building my own RF circuits and would
> > >>like to get a bunch of this "copper clad" material that you can solder
> parts
> > >>to for the "dirty" construction style. Where do you get this stuff
> > >>typically? Is there a bargain-rate place somewhere to order, or is it
> > >>pretty cheap normally? I've never seen any of it at "The Shack".
>
> Do as I do, take the phonebook and look up the compagnys near to you
> that makes PCB boards, and then go hunting in their garbage container.
> I collected several kilo's of materials that way, and for free :)
>
> Regards Max

I get mine at Gateway Electronics in St.Louis, I live near them, but I
think you can mail order from them, so do a search. They are very
reasonable.

1558. Re: Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 16:40:11 UTC
From: mcalhoun@ksu.edu
Message-ID: <b3tc5b$dg4@unix2.cc.ksu.edu>
Source record: 37461

>....[snip]....
>Here's my question: I need a decent 40m antenna for the same hilltop (to
>use with my upcoming SW-40 and RockMite 40 kits). I can't string enough
>wire to make a 40m dipole work. I'd like to use a vertical, but my past
>....[snip]....

After an experience of having to use QRP from Africa after my 100-watt
rig was totaled on the way to the airport, I'm not "into" QRP, but I have
found that two identical whip antennas which are normally used in vertical
positions and a cobbled mount to make a horizontal dipole "beam" work
pretty well, even when mounted less than two feet above a vehicle (with
the dipole pointed fore and aft).

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1559. FDK Multi 2000 vhf set cct wntd

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 18:50:01 UTC
From: G4BXD@qsl.net
Message-ID: <3e625255.1010608@news.compuserve.com>
Source record: 37462

FDK Multi 2000 vhf set cct wntd

any info, cct,manual etc.

please contact

BEn G4BXD@qsl.net

1560. WANTED: Dentron W-2 Wattmeter Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 19:46:59 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <Vet8a.82712$L47.12239418@read2.cgocable.net>
Source record: 37463
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Am looking for Technical Manual and/or schematics for the Dentron W-2
Wattmeter...picked one up at a recent Fleamarket and needs minor
adjustments/repair
Please advise availability & copying cost.
73...Norm VE3CZI

1561. Help with mini DIN connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 20:15:33 UTC
From: whru@msn.com
Message-ID: <e52bdeaf.0303021215.7ff673e4@posting.google.com>
Source record: 37464

I am looking for a what seems like a mini/mini DIN/USB connector cable. The cable connects a digital camera to a TV or a computer USB port. I need a source of the connectors so I can make a cable. I also need the pin layout.
Thanks 73, wb6iiq
Fred

1562. Re: Help with mini DIN connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:03:57 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <cgr46vg10jtc5sjoeebjd5oqnrqf55ukts@4ax.com>
Source record: 37465

On 2 Mar 2003 12:15:33 -0800, whru@msn.com (Fred) wrote:

>I am looking for a what seems like a mini/mini DIN/USB connector
>cable. The cable connects a digital camera to a TV or a computer USB
>port. I need a source of the connectors so I can make a cable. I also
>need the pin layout.
>Thanks 73, wb6iiq
>Fred

There are many "standard" connectors in that size range. More info,
and a picture of the connector on your website, would help a great
deal.

Alternately, search Newark, Mouser, etc. or look up your camera model
for the connector type.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1563. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:06:46 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E627266.5060209@bellsouth.net>
Source record: 37466

> updated it. You will notice that the bandwidths of the filters on the Rx
> board were not shown. That has been corrected. Also, the 30MHz reference
> frequency for the DDS

Pete as I emailed direct to you I don't quite understand how the DDS
clock frequency
can be 30mhz, as the dds output must go as high as 40.7 mhz to satisfy
the Nyquest criteria
the clock has to be at least 81.4 mhz. The 9852 dds chip does have a
clock multiplier/ pll, but
I don't think the 9851 does.
Also is that a bpf or a lpf on the output of the dds? (If it is a bpf,
it is a rather special
design to go from 10.7-40.7 mhz and have steep enough sides to cut off
the higher order
harmonics). I would have used switchable bpf's on the output of the
dds, similar to the
ones on the receiver input. Do you have access to a spectrum analyizer,
and if so, have you
checked the output of the DDS?

Also I have seen a design that used the DDS as a divider
for a PLL. In this lo a reference in the neighborhood of 1mhz is used
and the output of the pll
is feed to the dds as the clock, the dds divides this down to the
reference frequency. This design
seems to have an advantage in that the DDS can operate at half the clock
frequency required
for it to generate the lo directly and the pll cleans up the aliasing
crap.

1564. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:35:58 UTC
From: averyfineman@aol.com
Message-ID: <20030302163558.13870.00000223@mb-bh.aol.com>
Source record: 37467

In article <b3rvnv$s2n$1@knossos.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> writes:

>> So why do SWR meter designs have to be skewed so greatly?
>> Jason Hsu, AG4DG
>
>==========
>
>Jason,
>
>There's a strict mathematical relationship between the output voltage of a
>so-called SWR bridge, the linear meter deflection of a moving coil meter,
>and the SWR which causes it.
>
>So there's nothing anybody can do about how the meter scale is graduated
>such that the needle indicates an SWR between 1 and infinity.

Well, Jason asked a very general question on the "why" of
making commercial "SWR" meters. The "why" is probably
related to a minimum of design time expended on absolute
accuracy versus a maximum of product profit in production.
:-)

>If you should feel the need for more sensible, meaningful, graduations then
>erase all thoughts from your mind about SWR and calibrate the scale LINEARLY
>from 0-to-1 (full scale deflection) in terms of "Magnitude of the Reflection
>Coefficient".
>
>Actually, there's no such thing as an SWR meter. The name is a misnomer. In
>most situations there isn't even a transmission line to measure it on.

True... :-) Industry uses the term "VSWR" or "Voltage Standing
Wave Ratio" (commonly pronounced "viz-war") as more indicative
of the common measurement method with some form of
directional coupler gizmo. For some really old, old, and tiring,
tiring ways to measure there is the ever-loving "slab-line" with
e-probe which does use a transmission line section but
measures only the electric field...hence the VSWR term origin.

>Of course, the little box between transmitter and tuner does perform a
>valuable function. But a far more appropriate name is TLI = "Transmitter
>Loading Indicator". And it needs no scale graduations.
>
>That you have already discovered little useful meaning can be attached to
>indicated SWR values (eg., the difference between 9 and 11) is itself
>sufficient evidence of no need for scale markings.

>
>The magnitude of the reflection coefficient is not of much use either.
>Nothing can be calculated from it because phase information has been
>willfully discarded.

True enough...but a coupling device (such as an antenna tuning
unit) might be optimized through considerable, focussed tweaking
while looking for a minimum reflection. :-)

Those who want to optimize their power transfer into an antenna
should take the time to measure antenna impedance or
admittance over frequency. VSWR can be derived from that
with as much or more accuracy than using directional couplers
of any kind.

>In view of your description "super" power meter you should be warned that
>the most inaccurate procedure in RF engineering is the measurement of power.

Oy...I have to disagree with that!

RF power measurement of an unmodulated carrier is as accurate
as the power meter's calibration. Such calibration is usually
based on calorimetric standards which are better than 1%.
In-use accuracy of RF power depends both on the power meter's
intrinsic calibration with a perfect source but also on the effect
of the imperfect RF impedance of the power sensor at that
frequency. Such sensor imperfections can be measured
independently (impedance quantified) and that used to determine
the overall inaccuracy.

Where the alleged inaccuracy comes about, it is in trying to
measure power output of an RF source in-line with an unknown
impedance. Not only is this highly dependent on that impedance
(or its inverse of admittance) but it is also dependent on the
RF source's ability to supply power into non-optimum
impedances...i.e., the source's source impedance plays a part
in that.

>Consider it essential to check accuracy by making entirely independent
>measurements of the power dissipated in say a 500-ohm load on the antenna
>side a 50-to-500 ohm ATU.

A partial "calibration" of a finished "SWR" meter can be done
with different non-reactive resistances. If the reactance of such
resistors (usually made of unobtainium) is nil, the "SWR" is
determined solely on the magnitude components. No phase
component of the load impedance is there to mess up thoughts.

Unfortunately, a finite human-built "SWR" meter will have
assorted reactances which react over frequency, independent
(and perhaps in spite of) of load characteristics. Those things
can mess up one's day. There ARE answers to all that and
ways to isolate them or make them relatively inconsequential

but that leads to unfriendly territory of militant "4-ports" having
S-parameter-like equations. Hewlett-Packard has a number of
very nice application notes addressing that in detail as part of
their early push on their network analyzers. Skullwork needed
for understanding but the answers are out there.

Len Anderson
retired (from regular hours) electronic engineer person

1565. Re: Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:54:11 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <74v8a.7761$Uy4.659859@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37468

>...two identical whip antennas which are normally used in vertical
> positions and a cobbled mount to make a horizontal dipole "beam" work
> pretty well, even when mounted less than two feet above a vehicle (with
> the dipole pointed fore and aft).
>
> --Myron, W0PBV.

Myron,

Thanks for the info. I was kind of leaning this way as well. I've got a 40m hamstick, so for a few dollars I can buy a second one and rig together a feedpoint. Even though I wouldn't have much height above ground it might be the easiest solution. Or adding traps to the 20m dipole as the other fellow suggested.

73,
Bert

1566. Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:57:02 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <O6v8a.7764$Uy4.659463@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37469

I just got the new ARRL publication last week and built the first circuit, a direct-conversion receiver for 40m. Has anyone else built this yet? I can't get mine to work but it might just be some dumb mistake I made someplace.

If anyone else is also dabbling with this circuit, please drop me an email and we can compare notes.

Thanks & 73,
Bert WF7I

1567. Re: Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 21:57:44 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <s7v8a.7765$Uy4.659703@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37470

Thanks to all who replied. I took your info down and will refer to it for future parts needs!

73,
Bert

1568. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 22:34:00 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <LdycnVgaXfCSC_-jXTWcow@ctc.net>
Source record: 37474

```
"> >direct-conversion receiver for 40m. Has anyone else built this yet? I
> >can't get mine to work but it might just be some dumb mistake I made
> >someplace.
>
> What's a "direct-conversion" receiver? If you mean there's no IF
> involved, then nothing's converted, directly or indirectly.
> Clarification, please.
> --

The local oscillator is tuned to the same frequency as the incomming signal
or slightly off of it just as a BFO would be in the IF of a more
conventional receiver would.
```

1569. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 22:47:02 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <nh156vg6sblun00185nig0aog0a2sh6ig2@4ax.com>
Source record: 37472

On Sun, 02 Mar 2003 21:57:02 GMT, "Bert Herald"
<bert.herald@worldnet.att.net> opined thusly:

>I just got the new ARRL publication last week and built the first circuit, a
>direct-conversion receiver for 40m. Has anyone else built this yet? I
>can't get mine to work but it might just be some dumb mistake I made
>someplace.

What's a "direct-conversion" receiver? If you mean there's no IF
involved, then nothing's converted, directly or indirectly.
Clarification, please.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1570. Re: General Coverage Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 23:02:36 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <g4w8a.78280$zF6.5583140@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37471

Actually, the AD9851 has a (X6) PLL multiplier on board; that is how I can clock it at 180MHz by using a 30MHz reference source. As far as Nyquist criteria.....in theory is works, but my experience with the Synthesizer Group at Rockwell has shown me that a DDS shouldn't really be used at more than 33% of its clock frequency. 25% seems to be the "sweet spot". Also, as you probably already know, DDSs have many low level artifacts that remain at the same amplitude, regardless of clocking frequency. I think as the number of bit resolution in the DDS is increased the carrier to artifact ratio does improve. I do have a 9852 eval board, and it seems to be much cleaner than the 9851, but that current draw!
About that filter.....yes, it is a bandpass filter, and the skirts are not super steep, but it does the trick, because the low-pass filter after the RF amplifier helps quite a bit. This unit is capable of putting out +17dBm, but with the component values shown, output varies from +7dBm at 10.7MHz to +8.5dBm at 40.7mHz, being very smooth in output between those frequencies.
I do have an 8558 Spectrum Analyzer, so I was able to characterize the unit for spectral purity. The 2nd harmonic is -35dBc, which is fine with this receiver, because the filters at the front end of the receiver will reject the resulting spurious responses. Think about designers who use square wave injection at the LO port of a diode ring mixer, which, by the way, I am using.
For critical evaluation of the DDS, I used an HP 8563 Spectrum Analyzer, with Phase Noise Utility. At a 7kHz offset, the phase noise measures -124dBc, which isn't bad, considering that I am using a packaged Epson oscillator as the reference. If I were to use a discrete crystal oscillator, with a 200Hz crystal filter at its output, the phase noise could possibly be better.
Most of the low level artifacts measured between -65dBc and -75dBc. There were a couple of those stationary artifacts, that when you tuned the outpur signal through them, would increase in amplitude to -54dBc.
This DDS is in no way as clean as some of the PLL designs that I've built over the years, but still.....it's pretty cool, having everything on that small board. I will be uploading a later version of the code that allows you to set the I.F. offset on the fly, drives Optrex 2-line displays, and has tunable memories. I just need to test this code a bit.
That last idea that you referenced sounds good; I was thinking of an approach, using one of my old PLL boards, having the divide ratio fixed, and using the DDS as a variable reference. This way, the PLL would act as a tracking filter. There have just been so many kettles on the fire, I just haven't had the time to put into it yet.
On a final note.....I do appreciate your input; it is these things that help everybody along. I know that I mentioned this in our private e-mail earlier this afternoon, but I will mention it here. I will

be uploading a high output version of the ARRL noise source, a random audio noise source, and a general purpose NE602 based SSB Detector that can be used with boatanchor receivers. This is the same detector circuit that I use in my receiver, and is tunable from 480 to 610kHz, using the specified Toko RMC502182 transformer.

Pete

scharkalvin <wa2mze@bellsouth.net> wrote in message news:3E627266.5060209@bellsouth.net...
> > updated it. You will notice that the bandwidths of the filters on the Rx
> > board were not shown. That has been corrected. Also, the 30MHz reference
> > frequency for the DDS
>
> Pete as I emailed direct to you I don't quite understand how the DDS
> clock frequency
> can be 30mhz, as the dds output must go as high as 40.7 mhz to satisfy
> the Nyquest criteria
> the clock has to be at least 81.4 mhz. The 9852 dds chip does have a
> clock multiplier/ pll, but
> I don't think the 9851 does.
> Also is that a bpf or a lpf on the output of the dds? (If it is a bpf,
> it is a rather special
> design to go from 10.7-40.7 mhz and have steep enough sides to cut off
> the higher order
> harmonics). I would have used switchable bpf's on the output of the
> dds, similar to the
> ones on the receiver input. Do you have access to a spectrum analyizer,
> and if so, have you
> checked the output of the DDS?
>
> Also I have seen a design that used the DDS as a divider
> for a PLL. In this lo a reference in the neighborhood of 1mhz is used
> and the output of the pll
> is feed to the dds as the clock, the dds divides this down to the
> reference frequency. This design
> seems to have an advantage in that the DDS can operate at half the clock
> frequency required
> for it to generate the lo directly and the pll cleans up the aliasing
> crap.
>
>

1571. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 23:32:21 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E629485.8070905@bellsouth.net>
Source record: 37473

Paul Burridge wrote:
> On Sun, 02 Mar 2003 21:57:02 GMT, "Bert Herald"
> <bert.herald@worldnet.att.net> opined thusly:
>
>
>>I just got the new ARRL publication last week and built the first circuit, a
>>direct-conversion receiver for 40m. Has anyone else built this yet? I
>>can't get mine to work but it might just be some dumb mistake I made
>>someplace.
>
>
> What's a "direct-conversion" receiver? If you mean there's no IF
> involved, then nothing's converted, directly or indirectly.
> Clarification, please.

The direct conversion receiver is basicly just a product detector
operating at
the air frequency. Perhaps direct conversion is a poor term, but what would
you call it?

1572. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 23:50:31 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <b4656vggara0nhdvi18tngjltjmd8opuat@4ax.com>
Source record: 37476

On Sun, 02 Mar 2003 22:47:02 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>What's a "direct-conversion" receiver? If you mean there's no IF
>involved, then nothing's converted, directly or indirectly.
>Clarification, please.

You want to bet? Put "direct-conversion receiver" into the Google
search engine and see what you get.

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

1573. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-02 23:57:48 UTC
From: jgboyles@aol.com
Message-ID: <20030302185748.01981.00000330@mb-mp.aol.com>
Source record: 37475

>What's a "direct-conversion" receiver? If you mean there's no IF
>involved, then nothing's converted, directly or indirectly.
Direct conversion from rf to audio. RF mixed with Local Oscillator + filter
to yield audio. These have been around since the 1960's, when I guess solid
state mixers and amps got popular. Surprised you have never heard of them.
May be wrong, but direct conversion receiver applies only to solid state, not
the old tfr tube stuff. If I am wrong, sure someone will let me know.

73 Gary N4AST

1574. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 00:33:57 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E62A2F5.508@bellsouth.net>
Source record: 37477

JGBOYLES wrote:
>>What's a "direct-conversion" receiver? If you mean there's no IF
>>involved, then nothing's converted, directly or indirectly.
>
> Direct conversion from rf to audio. RF mixed with Local Oscillator + filter
> to yield audio. These have been around since the 1960's, when I guess solid
> state mixers and amps got popular. Surprised you have never heard of them.
> May be wrong, but direct conversion receiver applies only to solid state, not
> the old tfr tube stuff. If I am wrong, sure someone will let me know.
>
> 73 Gary N4AST

Many years ago (I don't remember the issue) there was an article in QST
involving an image reject direct conversion receiver using tubes. I
think it
used a pair of 6SB7Y's. It used that old B&W audio phase shift network
(housed
in a metal tube can with an octal base) and an rf r-l-c phase shift
network. What this
is is sortof a balanced modulator run bassackwards to mix the incoming
signal with
two local oscillator signals 90 degrees out of phase. It generates two
audio signals
90 degrees out of phase which are combined in the B&W network. The
result is
a single signal direct conversion receiver. There have been solid state
versions in QST
more recently, but it was first done with tubes. The terminology was
different then,
but (to quote the Bard) " a rose by any other name ..... "

1575. Re: Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 00:48:09 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9332AAEC9BEC8pookster@216.168.3.50>
Source record: 37478

"Bert Herald" <bert.herald@worldnet.att.net> wrote in
news:74v8a.7761$Uy4.659859@bgtnsc05-news.ops.worldnet.att.net:

> Thanks for the info. I was kind of leaning this way as well. I've
> got a 40m hamstick, so for a few dollars I can buy a second one and
> rig together a feedpoint. Even though I wouldn't have much height
> above ground it might be the easiest solution. Or adding traps to the
> 20m dipole as the other fellow suggested.
>

This will work but the feed point impedance will be very low, on the
order of a few ohms. A simple L network will match it fine. See any
ARRL handbook. Efficiency will be pretty low, too.

--
Bill, W7TI

1576. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 01:21:18 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <k6y8a.12$tp6.1@news.inreach.com>
Source record: 37479

Gary:

I think you meant TRF not tfr. TRF has both tube and solid state variants: solid state receivers using the ZN-414 type chips are TRF's. And you can very easily build a tube type DC rx. Doug DeMaw published a tube tranceiver with a DC receiver in QST many years ago.

The difference between a TRF and a DC (direct conversion) is that TRF's usually have a diode type detector for AM reception, whereas DC's have a product detector making them useful for CW and SSB.

Roger K6XQ

1577. switchmode psu

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 01:42:53 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046655775.78306@auth2.dns.griffin.net.uk>
Source record: 37480

looking for buildable 28v 20A min and 50v 10A min switchmode psu designs (ie
can source or make the transformers,)
any ideas??

thanks simon G0zen

1578. Re: Help with mini DIN connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 03:09:54 UTC
From: whru@msn.com
Message-ID: <e52bdeaf.0303021909.44ba391a@posting.google.com>
Source record: 37481

HP calls it a "special connector". How do you like that?
incompatibility at its finest.
Fred

Gary S. <Idontwantspam@net> wrote in message
news:<cgr46vg10jtc5sjoeebjd5oqnrqf55ukts@4ax.com>...
> On 2 Mar 2003 12:15:33 -0800, whru@msn.com (Fred) wrote:
>
> >I am looking for a what seems like a mini/mini DIN/USB connector
> >cable. The cable connects a digital camera to a TV or a computer USB
> >port. I need a source of the connectors so I can make a cable. I also
> >need the pin layout.
> >Thanks 73, wb6iiq
> >Fred
>
> There are many "standard" connectors in that size range. More info,
> and a picture of the connector on your website, would help a great
> deal.
>
> Alternately, search Newark, Mouser, etc. or look up your camera model
> for the connector type.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

1579. Re: Help with mini DIN connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 03:20:35 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <5ci56vsdq1nnc7btchrqld6p46g9kko0vs@4ax.com>
Source record: 37482

On 2 Mar 2003 19:09:54 -0800, whru@msn.com (Fred) wrote:

>HP calls it a "special connector". How do you like that?
>incompatibility at its finest.
>Fred
>
Special means they will sell it to you at a mere 300% markup?

We need another special connector like we need a new measuring system
to replace metric AND English.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1580. Trade Garmin GPS-40

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 05:08:44 UTC
From: Don <don-com1@attbi.com>
Message-ID: <wrB8a.326013$HN5.1416988@rwcrnsc51.ops.asp.att.net>
Source record: 37483

Will trade a Garmin GPS-40 (8) satellite RX GPS unit in excellent condition for Ham Gear. Looking for a Johnson Viking Ranger I or II in good condition.

Regards,
Don W6PJJ
Sacramento, CA

1581. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 05:58:47 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <raC8a.6352$Xh1.30562@news-server.bigpond.net.au>
Source record: 37484

Don wrote:
> NEWS FLASH...
>
> THE US HAS FOUND A WAY TO LIGHT THOSE VERY BIG CIGARS THAT SADDAM
> SMOKES.

The problem is, Dubya might just be stupid enough to use one... :(

1582. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 07:04:05 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <F7D8a.67808$lf5.3580811@twister.southeast.rr.com>
Source record: 37485
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

If you want to see the effect of tuning when SWR is high you should be watching reflected power not SWR.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0303011208.4bb127c9@posting.google.com...
> I would particularly like to hear what Reg, Roy, and Doc have to say.
>
> I'm working on a super SWR/wattmeter for a graduate school project.
> Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> good resolution only at low SWR levels? The reflection co-efficient
> (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> But for all of the SWR meters I have seen (including my cross-needle
> MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> it. In fact, the middle of the scale is usually an SWR of more like
> 2. But a transmitter SWR under 2 is good enough. Does it really
> matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
> would help to know if you are tuning in the right direction. On my
> SWR meter, it's hard to tell the difference between an SWR of 5 and an
> SWR of infinity. I would rather have the good resolution at high SWR
> levels, and that is the inspiration for my project. I may seem
> strange to you, but I would like to know if I have lowered my SWR from
> 15 to 10. At least I would know I'm going in the right direction, and
> I would know if I passed up the low SWR point.
>
> An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
> corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
> be as easy as showing an SWR of 2, but an SWR of 5 is usually
> portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
> a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
> ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
> while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
> corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
> to a reflection ratio of .91.
>
> So why do SWR meter designs have to be skewed so greatly?
>
>
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

1583. TS-140S EPROM

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 11:45:20 UTC
From: kenik@inp.nsk.su
Message-ID: <aaa42577.0303030345.460f4354@posting.google.com>
Source record: 37486

Who can help with TS-140S 27C128 EPROM image
Thanks in advance.

Igor

1584. HF SSB SETS FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 14:54:41 UTC
From: G4BXD@qsl.net
Message-ID: <3e636bf3.255436@news.compuserve.com>
Source record: 37487

HF SSB SETS FS

Trio TS-510 transceiver, no psu or pa valves but working fine,
add simple lt/ht psu for ham bands rx. .. £25.

FT-250 transceiver, 80-10, with psu, mic, lead etc, working,
60w o/p ssb/cw. suit foundation use ? .. £65

plus postage if needed or can take to Wythal Rally this sunday.

Ben.

1585. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 15:10:30 UTC
From: Fred Bartoli <fred.bartoli.nospamplease@free.removethis.fr.invalid>
Message-ID: <3e6377e7$0$296$626a54ce@news.free.fr>
Source record: 37488

"Steve Andrew" <sjandrew@bigpond.net.au> a crit dans le message news:
raC8a.6352$Xh1.30562@news-server.bigpond.net.au...
> Don wrote:
> > NEWS FLASH...
> >
> > THE US HAS FOUND A WAY TO LIGHT THOSE VERY BIG CIGARS THAT SADDAM
> > SMOKES.
>
> The problem is, Dubya might just be stupid enough to use one... :(
>
>
>
>

Clinton, Bush... Presidents pass, the cigars stay.
Not the same ones though...

Fred.

1586. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 16:12:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3vutl$r1q$1@knossos.btinternet.com>
Source record: 37489
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jimmy" wrote -
> If you want to see the effect of tuning when SWR is high you should be
> watching reflected power not SWR.

==========

Of what possible use is swr OR reflected power to an HF amateur?

He needs to know only whether or not the transmitter is loaded with a
resistance of approximately 50 ohms.

Anything else is just something to waffle about by SWR meter salesmen and on
newsgroups. ;o

Reg, G4FGQ

.

1587. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 16:18:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <17t66v0fqsba6svdi30ghdqgj6kq34l53l@4ax.com>
Source record: 37490
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 1 Mar 2003 12:08:05 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

|I would particularly like to hear what Reg, Roy, and Doc have to say.
|
|I'm working on a super SWR/wattmeter for a graduate school project.
|Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
|good resolution only at low SWR levels? The reflection co-efficient
|(reflected voltage divided by forward voltage) is .5 at an SWR of 3.
|But for all of the SWR meters I have seen (including my cross-needle
|MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
|it. In fact, the middle of the scale is usually an SWR of more like
|2. But a transmitter SWR under 2 is good enough. Does it really
|matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
|would help to know if you are tuning in the right direction. On my
|SWR meter, it's hard to tell the difference between an SWR of 5 and an
|SWR of infinity. I would rather have the good resolution at high SWR
|levels, and that is the inspiration for my project. I may seem
|strange to you, but I would like to know if I have lowered my SWR from
|15 to 10. At least I would know I'm going in the right direction, and
|I would know if I passed up the low SWR point.
|
|An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
|corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
|be as easy as showing an SWR of 2, but an SWR of 5 is usually
|portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
|a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
|ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
|while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
|corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
|to a reflection ratio of .91.
|
|So why do SWR meter designs have to be skewed so greatly?
|

Most of these things are actually measuring reflection coefficient and
displaying it as something else: SWR.

In the old days, circuits such as the Monimatch, etc. were set up with
a front panel pot that adjusted the meter sensitivity. You switched
to the forward position and adjusted the meter to FS. This
"normalized" the meter to account for the incident power.

When you switched to reverse, you were reading the normalized
reflection coefficient (rho), but the meter face was calibrated in SWR

where:

SWR = (1+rho)/(1-rho) Eq.1

So with SWR = 3:1, the meter reads half-scale. If the builder wants to normalize the forward reading to something other than one (FS), the reverse reading will move accordingly. Now you have to get inside the head of the designer.

In your case, you seem to want to look for small changes in a big number. (Going from SWR 15:1 to 10:1 is the difference between 0.875 and 0.818) Clearly, a piece of cake for a DVM but rather difficult with an analog meter. (Hint)

1588. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 18:38:20 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E63A117.1000707@get.lost>
Source record: 37491
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Reg Edwards wrote:

>>If you want to see the effect of tuning when SWR is high you should be
>>watching reflected power not SWR.
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.

OK, and how is he supposed to find that out *without* the SWR meter?
Please don't say the antenna analyzer.

> Anything else is just something to waffle about by SWR meter salesmen and on
> newsgroups. ;o

From the amount of your anti-SWR meter posts, one would conclude you're
an antenna tuner salesman.

SWR meter is a useful tool because it provides a quick and cheap visual
indication of the antenna resonance, over short and long periods of
time. The user is able to determine not only whether his signal is
making it to the antenna, but also whether there is a change in
performance which may indicate a problem with either the antenna or
something else in the output path.

73 ... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

1589. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 18:54:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63A4FA.2040407@ieee.org>
Source record: 37492
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Zoran Brlecic wrote:
> Reg Edwards wrote:
>> He needs to know only whether or not the transmitter is loaded with a
>> resistance of approximately 50 ohms.
>
> OK, and how is he supposed to find that out *without* the SWR meter?

Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
Aren't those used in SWR meters? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1590. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 19:02:38 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <pv076vou6ghq02to6reouui41llnfchk5h@4ax.com>
Source record: 37494

On Mon, 3 Mar 2003 16:10:30 +0100, "Fred Bartoli"
<fred.bartoli.nospamplease@free.removethis.fr.invalid> opined thusly:

>
>Clinton, Bush... Presidents pass, the cigars stay.
>Not the same ones though...

Well, quite. That one of Clinton's was presumably unsmokable or else
bloody hard to light. I somehow think flavor might have been a bit
tainted as well. Shame really - certainly to those of us who
appreciate a fine cigar and know which orifice it rightfully belongs
in.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1591. Re: HF SSB SETS FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 19:02:39 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <m7176vkk2kdqfjrj6br1798ajap6eaq7sc@4ax.com>
Source record: 37495

On Mon, 03 Mar 2003 14:54:41 GMT, G4BXD@qsl.net (milradio) opined
thusly:

>HF SSB SETS FS
>
>Trio TS-510 transceiver, no psu or pa valves but working fine,
>add simple lt/ht psu for ham bands rx. .. ï¿½25.
>
>FT-250 transceiver, 80-10, with psu, mic, lead etc, working,
>60w o/p ssb/cw. suit foundation use ? .. ï¿½65
>
>plus postage if needed or can take to Wythal Rally this sunday.

Where's Wythal?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1592. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 19:15:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vma76vcocea9gli6geqgg03sajome8vbhs@4ax.com>
Source record: 37493
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 03 Mar 2003 12:54:50 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Zoran Brlecic wrote:
>> Reg Edwards wrote:
>>> He needs to know only whether or not the transmitter is loaded with a
>>> resistance of approximately 50 ohms.
>>
>> OK, and how is he supposed to find that out *without* the SWR meter?
>
>Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
>Aren't those used in SWR meters? :-)

No.

73's
Richard Clark, KB7QHC

1593. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 19:30:55 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0303031130.5ee1801@posting.google.com>
Source record: 37496

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<b4656vggara0nhdvi18tngjltjmd8opuat@4ax.com>...
> On Sun, 02 Mar 2003 22:47:02 +0000, Paul Burridge
> <redscar@waitrose.notthisbit.com> wrote:
>
> >What's a "direct-conversion" receiver? If you mean there's no IF
> >involved, then nothing's converted, directly or indirectly.
> >Clarification, please.
>
> You want to bet? Put "direct-conversion receiver" into the Google
> search engine and see what you get.
>
> Danny
> K6MHE
>
>
> No trees were destroyed in the sending of this message.
> However, a large number of electrons were terribly inconvenienced.

I havent built the receiver you are describing. But in relavence to
the other subject on here, I think back in the tube days a direct
conversion was called an "autodyne".

1594. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 21:31:30 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <SQP8a.80161$zF6.5698152@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37297

Just to clarify a bit. The new book is called "Experimental Methods in RF Design" and is by Wes Hayward, Rick Campbell, and Bob Larkin (all hams of course). It's brand new from ARRL, not even in stores yet I guess.

The circuit I'm working on is on page 1.8, Fig. 1.9, "Direct conversion 7-MHz receiver using two integrated circuits". I can't get the Colpitts oscillator to oscillate right now. I've heard this oscillator can be real finicky.

If anyone is working on this, or has bought this book and has thoughts about the book, I'd be real interested in the feedback.

73s,
Bert
(a newbie to RF homebrew & design)

1595. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 21:41:13 UTC
From: jgboyles@aol.com
Message-ID: <20030303164113.23914.00000348@mb-cf.aol.com>
Source record: 37298

>I think you meant TRF not tfr.

Right Roger, I had that scrambled, thanks for pointing that out.

73 Gary N4AST

1596. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 21:50:57 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <57Q8a.68038$lf5.3662719@twister.southeast.rr.com>
Source record: 37299
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I dont care , Just what he wanted to know.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b3vutl$r1q$1@knossos.btinternet.com...
> "Jimmy" wrote -
> > If you want to see the effect of tuning when SWR is high you should be
> > watching reflected power not SWR.
>
> ================================
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.
>
> Anything else is just something to waffle about by SWR meter salesmen and
on
> newsgroups. ;o
> ---
> Reg, G4FGQ
>
> .
>
>

1597. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 22:21:14 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.18cd75386536b01b989684@news-central.giganews.com>
Source record: 37300

In article <SQP8a.80161$zF6.5698152@bgtnsc04-news.ops.worldnet.att.net>,
bert.herald@worldnet.att.net says...

> If anyone is working on this, or has bought this book and has thoughts about
> the book, I'd be real interested in the feedback.
>

Nice book. Shame they couldn't afford a typesetter.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1598. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 22:23:45 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303031423.5fac29de@posting.google.com>
Source record: 37301
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

OK, OK, so the diode detectors operate in the square law region and the forward/reverse power meter scales are logarithmic.

However, I still can't understand why people aren't interested in SWR measurements above 5. Don't many HF operators use nonresonant antennas? What about those using a random wire? G5RV? Or a mobile antenna with bandwidth narrower than Ally McBeal's waistline? Come on, I don't see how anyone can hold the SWR under 5 over the entire 160m or 75/80m bands, especially those who don't have room for a 65-130-foot vertical antenna or a 130-260-foot dipole as well as those who use one antenna for multiple bands.

How do you keep your transmitter SWR under 5 for the entire band? Come on, SWR bandwidth is so tight on 160m and 75/80m that it would be easy to miss the resonant settings when twisting those tuner knobs. I would think you would want to know when you have brought your SWR of 20 down to single digits so that you know it's time to slow down your knob-twisting.

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

1599. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 22:33:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b40l79$a4c$1@sparta.btinternet.com>
Source record: 37302
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Zoran Brlecic" wrote -
>
> From the amount of your anti-SWR meter posts, one would conclude you're
> an antenna tuner salesman.

==========

The original enquirer and other readers may wish to draw their own
conclusions from YOUR posts.

Reg G4FGQ

1600. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 23:06:57 UTC
From: John Eckert <john_eckert@agilent.com>
Message-ID: <1046732849.277635@cswreg.cos.agilent.com>
Source record: 37303
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I'm with Roy. Once you determine your desired coupling ratio, that will dictate the turns ratio. 10:1 for 20db, 31:1 for 30db... You then need to choose a core material that yields enough reactance at your lowest frequency (i.e. 4x Zo) with those turns. Then choose one large enough to handle the power.
Regards,
JE

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v3ortfkfuffr4c@corp.supernews.com...
> With any of the ferrites of reasonable permeability, coupling isn't a
> problem in a transformer -- you'll get very close to a unity coefficient
> of coupling with any of them. So the issues are:
>
> 1. You need to have adequate winding impedance. That is, the impedance
> of a winding should be at least several times the impedance of the
> circuit it's connected across. Unless power dissipation is a problem
> (see #2, below), it doesn't matter what the angle of the impedance is. A
> resistive, as opposed to reactive, impedance is often more desirable
> because it stays relatively constant over a wide range of frequency.
>
> 2. Heating. The power the core dissipates due to each winding is
> approximately winding I^2 * R, where R is the resistive part of the
> winding impedance, and I is the signal current in the winding. You can
> keep this product in bounds by making R high. The heading will of course
> be less for larger cores. I've found that hysteresis or other
> amplitude-related loss isn't a concern for this sort of application. But
> you'd undoubtedly impress your professor by showing that you considered
> this, and the calculations you used to arrive at your conclusion.
>
> The frequency ranges given for ferrites are often based on the frequency
> range over which their impedance is primarily reactive, i.e., the range
> over which they make decent inductors or tuned circuit elements. These
> aren't the criteria that are important for broad band transformers,
> however. The main properties you have to consider are the ones impacting
> the two considerations above. Ferrites like type 61 have lower R for a
> given impedance, but you might not be able to get enough impedance over
> the frequency range, especially when resonance effects are considered.
> Type 43, on the other hand, might have dissipation problems at 200
> watts. Welcome to engineering!
>
> A graduate student should be able to calculate the necessary value of
> winding impedance based on the design requirements. You can find the

> impedances of cores of various sizes and materials at the Fair-Rite web
> site. Estimation of temperature rise based on physical size and mounting
> is also something a grad student should be able to handle, at least
> approximately. (A simple lab test to show the validity of the
> calculations or approximations would be a plus.) If you submitted your
> work to me as evidence of your ability when interviewing for an
> engineering job, I'd put a lot of weight on how you came to make the
> choices you did. Perhaps your professors use different criterion for
> judging work, however.
>
> Roy Lewallen, W7EL
>
> Jason Hsu wrote:
> > I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> > school independent study project. It will be able to handle power
> > levels as high as 200W (thus comfortably handle the full 100W) and
> > power levels as low as a small fraction of a watt.
> >
> > As you know, SWR meters use transformers as sensors to sample the load
> > current and voltage. Type 43 material looked like the best choice.
> > Most of the SWR meter designs I have seen use type 43 toroids
> > (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> > this material a frequency range of 1-50MHz.
> >
> > I will be placing my order on Monday, and I am leaning towards
> > FT50-43, since that seems to be the consensus of others who have built
> > SWRmeters.
> >
> > My three questions:
> > 1. Should I use type 43 or type 61 material?
> > 2. What size toroid should I use?
> >
> > Regarding question 1:
> > I was all set to order several type 43 toroidal cores from Palomar
> > Engineers only to find that they recommend type 61 at
> > http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> > According to the Palomar web site, transformers should use type 43
> > material is for .01-10 MHz but type 61 material for .2-100 MHz.
> > Bytemark lists the wide band frequency range of type 61 material as 10
> > to
> > 200 MHz
> >
> > Who is right? Palomar recommends type 61 while Bytemark and the
> > consensus of homebrewers recommend type 43. Under what circumstances
> > is type 61 better, and under what circumstances is type 43 better?
> >
> > Regarding question 2:
> >
> > I estimate that in the worst case scenarios (100-200W and a short
> > circuit or open circuit for a load), the RF transformers may be

> > subject up to 1-2 watts. This doesn't sound like much, but my Radio
> > Shack resistors can only handle .5 watts.
> >
> > I will be using either type 43 or type 61 ferrite material. I noticed
> > that most cores used in other SWR meter designs are size FT-50, which
> > is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> > thickness. Larger cores take up more space and cost more, but I
> > believe they can also handle more power. (Correct me if I am wrong.)
> > Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> > thick)? Is there any reason I should use a larger core? A smaller
> > core?
> >
> > Would using a larger (or smaller) core narrow the bandwidth or make it
> > less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> > MHz and at power levels as low as a fraction of a watt.
> >
> > Also, I have heard that Amidon has a formula for estimating the
> > maximum power a transformer can handle without heating up excessively.
> > Can anyone have a link to this?
> >
> > Jason Hsu, AG4DG
> > usenet@@@@jasonhsu.com
>
>

1601. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 23:26:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3e63e452.130926762@news.online.no>
Source record: 37304

On Mon, 03 Mar 2003 19:02:38 +0000, Paul Burridge
<redscar@waitrose.notthisbit.com> wrote:

>On Mon, 3 Mar 2003 16:10:30 +0100, "Fred Bartoli"
><fred.bartoli.nospamplease@free.removethis.fr.invalid> opined thusly:
>
>>
>>Clinton, Bush... Presidents pass, the cigars stay.
>>Not the same ones though...
>
>Well, quite. That one of Clinton's was presumably unsmokable or else
>bloody hard to light. I somehow think flavor might have been a bit
>tainted as well. Shame really - certainly to those of us who
>appreciate a fine cigar and know which orifice it rightfully belongs
>in.
>--
Bush jokes are very popular over here in Europe, but they are not
usually available in English language.
Could somebody tell me where one could find jokes and nice pictures of
all the stupid things he does?

JM
--
remove ,xnd to reply

1602. Where do I find a UHF SWR meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 23:42:29 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3E63E865.4020107@hotmail.com>
Source record: 37305

I look around at SWR meters and they usually have a frequency limit of like 30mhz, or at the most 200mhz. Where do I find an SWR meter for 440, or even higher?

1603. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-03 23:51:26 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E63EA7E.8060600@bellsouth.net>
Source record: 37306

Doug wrote:
> Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<b4656vggara0nhdvi18tngjltjmd8opuat@4ax.com>...
>
>>On Sun, 02 Mar 2003 22:47:02 +0000, Paul Burridge
>><redscar@waitrose.notthisbit.com> wrote:
>>
>>
>>>What's a "direct-conversion" receiver? If you mean there's no IF
>>>involved, then nothing's converted, directly or indirectly.
>>>Clarification, please.
>>
>>You want to bet? Put "direct-conversion receiver" into the Google
>>search engine and see what you get.
>>
>>Danny
>>K6MHE
>>
>>
>>No trees were destroyed in the sending of this message.
>>However, a large number of electrons were terribly inconvenienced.
>
>
> I havent built the receiver you are describing. But in relavence to
> the other subject on here, I think back in the tube days a direct
> conversion was called an "autodyne".

No, an autodyne is another name for a receiver with a regenerative detector.
Perhaps 'syncrodyne' might be better, since a seperate oscillator is used.

1604. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 00:28:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F327.1030907@ieee.org>
Source record: 37307
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
>>Aren't those used in SWR meters? :-)
>
> No.

Of course they are, Richard, as defined on page 27-4 of my ARRL
Antenna Book, 17th Edition. There's even the "Maxwell" and the
"Bruene" bridges documented on that page.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1605. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 00:47:26 UTC
From: jgboyles@aol.com
Message-ID: <20030303194726.05066.00000281@mb-fb.aol.com>
Source record: 37308

>> If anyone is working on this, or has bought this book and has thoughts
>about
>> the book, I'd be real interested in the feedback.

>Nice book. Shame they couldn't afford a typesetter.

I was thinking about ordering this book, what is the problem with the
typesetter? Is it unreadable?
73 Gary N4AST

1606. Re: Where do I find a UHF SWR meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 01:43:53 UTC
From: Willis and Suzie Whatley <whatley@frii.com>
Message-ID: <3e64048c$0$97469$75868355@news.frii.net>
Source record: 37310

Radio Shack used to carry one made by Para Dynamics that covered 144 and 430 Mhz ranges at power levels up to 60 watts.

Not sure if they still have them.

WA5VRL
Willis

1607. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 02:08:25 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <ptedncrYIvoEl_mjXTWcow@comcast.com>
Source record: 37311

http://www.oselectronics.com/ is a possibility.

Tom, N3IJ

"H. Enquist" <henqvist@sympatico.ca> wrote in message
news:i%S7a.8151$kf7.1150252@news20.bellglobal.com...
> Hi everyone,
>
> I'm looking for a source for positive photo resist used for sensitizing
> copper laminate boards.
> I know sensitized boards are available but I want to sensitize and use my
> existing material.
> TIA
> Harry VE3MAL
>
>

1608. TS-870S ROMs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 02:15:38 UTC
From: John Eckert <john_eckert@agilent.com>
Message-ID: <1046744168.955639@cswreg.cos.agilent.com>
Source record: 37312

I have an early 870 with original firmware. Can anyone provide me with a later version ROM image?

Thanks,
John
k2ox@arrl.net

1609. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 02:35:58 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com>
Source record: 37309
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I'll show my ignorance here - is there a convenient way to calculate the temperature rise in the core that Jason originally referred to? I'd end up pulling out an old textbook and calculating Grashof and Nusselt numbers for laminar flow from a vertical plate, and then finding the thermal equilibrium
point. I imagine that there's an easier method for standard components.

Thanks,
- Bruce/ND8I

"John Eckert" <john_eckert@agilent.com> wrote in message news:1046732849.277635@cswreg.cos.agilent.com...
> I'm with Roy. Once you determine your desired coupling ratio, that will
> dictate the turns ratio. 10:1 for 20db, 31:1 for 30db... You then need to
> choose a core material that yields enough reactance at your lowest
> frequency (i.e. 4x Zo) with those turns. Then choose one large enough to
> handle the power.
> Regards,
> JE
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v3ortfkfuffr4c@corp.supernews.com...
<snip>
> >
> > A graduate student should be able to calculate the necessary value of
> > winding impedance based on the design requirements. You can find the
> > impedances of cores of various sizes and materials at the Fair-Rite web
> > site. Estimation of temperature rise based on physical size and mounting
> > is also something a grad student should be able to handle, at least
> > approximately. (A simple lab test to show the validity of the
> > calculations or approximations would be a plus.) If you submitted your
> > work to me as evidence of your ability when interviewing for an
> > engineering job, I'd put a lot of weight on how you came to make the
> > choices you did. Perhaps your professors use different criterion for
> > judging work, however.
> >
<snip>

1610. Re: Where do I find a UHF SWR meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 02:36:01 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <iaU8a.23583$Xa4.521@fe01.atl2.webusenet.com>
Source record: 37313

Bird Electronic Corporation http://www.bird-electronic.com/

Jim
N8EE

"Alex" <ve3leg@hotmail.com> wrote in message
news:3E63E865.4020107@hotmail.com...
> I look around at SWR meters and they usually have a frequency limit of
> like 30mhz, or at the most 200mhz. Where do I find an SWR meter for 440,
> or even higher?
>

1611. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 02:51:20 UTC
From: John Eckert <john_eckert@agilent.com>
Message-ID: <1046746312.168775@cswreg.cos.agilent.com>
Source record: 37314
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Well OK. I'll help you with your homework. :)

First let me address one of the things I've read here. "Most SWR meters are square law". Well- that would be nice but it's not true. Square law implies a linear detector output(voltage or current) vs. input power. Square law power meters therefor have linear scales. Most amateur power meters operate in the linear region of the detector. This is easy to verify by looking at the meter scale. The half scale deflection indicates one forth the fullscale power. Doubling the measured current(voltage) yields four times(two squared) the power. The meter movement responds linearly to current, but the scale is anotated as the square of its input.

Why are SWR meters most accurate at Zo? Two reasons: They are calibrated a Zo, that is they are nulled with a Zo load. Second, there are three error terms when measuring reflected power with a directional couple(ie SWR meter). They are source match error, load match error and directivity. As you move further from Zo the source and load match errors grow. At Zo these go to zero and you're left with the directivity error term only.

Regards,
John
k2ox

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0303031423.5fac29de@posting.google.com...
> OK, OK, so the diode detectors operate in the square law region and
> the forward/reverse power meter scales are logarithmic.
>
> However, I still can't understand why people aren't interested in SWR
> measurements above 5. Don't many HF operators use nonresonant
> antennas? What about those using a random wire? G5RV? Or a mobile
> antenna with bandwidth narrower than Ally McBeal's waistline? Come
> on, I don't see how anyone can hold the SWR under 5 over the entire
> 160m or 75/80m bands, especially those who don't have room for a
> 65-130-foot vertical antenna or a 130-260-foot dipole as well as those
> who use one antenna for multiple bands.
>
> How do you keep your transmitter SWR under 5 for the entire band?
> Come on, SWR bandwidth is so tight on 160m and 75/80m that it would be
> easy to miss the resonant settings when twisting those tuner knobs. I

> would think you would want to know when you have brought your SWR of
> 20 down to single digits so that you know it's time to slow down your
> knob-twisting.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

1612. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 03:34:24 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <8j786v4skqbbnarjr9gqku6pvjcqjr6m6c@4ax.com>
Source record: 37315

>"H. Enquist" <henqvist@sympatico.ca> wrote in message
>news:i%S7a.8151$kf7.1150252@news20.bellglobal.com...
>> Hi everyone,
>>
>> I'm looking for a source for positive photo resist used for sensitizing
>> copper laminate boards.
>> I know sensitized boards are available but I want to sensitize and use my
>> existing material.
>> TIA
>> Harry VE3MAL

Read the MSDS on this stuff, and use proper protective equipment and
ventilation.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1613. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 04:14:24 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <b4197q$i59$1@news.utelfla.com>
Source record: 37316

Gary S. <Idontwantspam@net> wrote in message
news:8j786v4skqbbnarjr9gqku6pvjcqjr6m6c@4ax.com...
> >"H. Enquist" <henqvist@sympatico.ca> wrote in message
> >news:i%S7a.8151$kf7.1150252@news20.bellglobal.com...
> >> Hi everyone,
> >>
> >> I'm looking for a source for positive photo resist used for sensitizing
> >> copper laminate boards.
> >> I know sensitized boards are available but I want to sensitize and use
my
> >> existing material.
> >> TIA
> >> Harry VE3MAL
>
> Read the MSDS on this stuff, and use proper protective equipment and
> ventilation.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

AFAIK, OS Electronics only has negative resist. The same goes for You-Do-It Electronics in your neck of the woods, Gary. (And if I'm wrong on this, please refer me to the right information!) Indeed, after some extensive looking I've not found a single supplier of liquid positive resist in the US willing to sell to a hobbyist in hobbyist quantities, although there are UK suppliers of the stuff (who won't ship across The Pond). In my college days, more years ago than I care to recall, I used to use AZ111, a positive photoresist that was made by the Shipley Company in Newton, MA, as well as Kodak KPR, which was a negative photoresist. (And yes, the solvents in both resists were nasty, which may explain the persistent rash I've had all these years... And while AZ111 was developed in a lye solution, KPR was developed in trichlor, which is *really* nasty.) I haven't been able to find either, although the negative resist I can buy appears somewhat similar to KPR. All the positive photoresist products I've seen that are suitable for hobbyists are copper-clad boards pre-sensitized with dry photoresist film. If anyone knows of a supplier of liquid positive resist willing to sell to a hobbyist in the US, I'd like to hear from you.

1614. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 04:29:36 UTC
From: averyfineman@aol.com
Message-ID: <20030303232936.29447.00000594@mb-cd.aol.com>
Source record: 37317

In article <3E63F327.1030907@ieee.org>, OC_CAM's Razor <Cecil.A.Moore@ieee.org>
writes:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
>>>Aren't those used in SWR meters? :-)
>>
>> No.
>
>Of course they are, Richard, as defined on page 27-4 of my ARRL
>Antenna Book, 17th Edition. There's even the "Maxwell" and the
>"Bruene" bridges documented on that page.
>--
>cheers, CAM http://www.qsl.net/w5dxp

Heyo Cecil,

As a side-note on the Bruene circuit, perhaps one of the first
uses of that magnitude-phase detection circuit is in the old
US military transmitter T-195 of the AN/GRC-19. The T-195
was designed with an integral automatic antenna tuner by
Collins Radio back in the 1950s.

A full theoretical description of that automatic tuner, complete
with phasing diagrams, practically a short course in how such
things work, is found in TM 11-806. That Technical Manual is
available free for download at August Johnson's website at

http://www.kg7bz.com/Manuals.html

The PDF download is a whopping 33 MB in size but it may be
well worth it to explain a tube-oriented HF transmitter in some
considerable detail. The final amplifier voltages and currents
are shown in diagrams above and below tuning, a good
tutorial on how those things operate. There's another TM there
on the accompanying R-392 HF receiver, also a Collins design.

TM 11-806 also has a lot of detail on construction of the Bruene
circuit and its directional detector. No dimensions but one can
get a feel for the size of things in comparison to other familiar
components. Strictly speaking, the Bruene circuit is a detector
but in the T-195 the detector output is made to a servo amplifier
in a bridge type decision circuit. Note: The T-195 can auto-
matically tune its final as well as the antenna tuning circuit.

Len Anderson
retired (from regular hours) electronic engineer person

1615. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 04:50:31 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E641C7B.CF296041@att.net>
Source record: 37318
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Worthwhile meters aren't calibrated in SWR ratio anyway. They're calibrated in watts forward and
reverse. You'd have to calculate the ratio if you were interested. I'm not. I just want that reverse wattmeter
reading to be low.

Dick

Jimmy wrote:

> If you want to see the effect of tuning when SWR is high you should be
> watching reflected power not SWR.
>
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0303011208.4bb127c9@posting.google.com...
> > I would particularly like to hear what Reg, Roy, and Doc have to say.
> >
> > I'm working on a super SWR/wattmeter for a graduate school project.
> > Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> > good resolution only at low SWR levels? The reflection co-efficient
> > (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> > But for all of the SWR meters I have seen (including my cross-needle
> > MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> > it. In fact, the middle of the scale is usually an SWR of more like
> > 2. But a transmitter SWR under 2 is good enough. Does it really
> > matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
> > would help to know if you are tuning in the right direction. On my
> > SWR meter, it's hard to tell the difference between an SWR of 5 and an
> > SWR of infinity. I would rather have the good resolution at high SWR
> > levels, and that is the inspiration for my project. I may seem
> > strange to you, but I would like to know if I have lowered my SWR from
> > 15 to 10. At least I would know I'm going in the right direction, and
> > I would know if I passed up the low SWR point.
> >
> > An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
> > corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
> > be as easy as showing an SWR of 2, but an SWR of 5 is usually
> > portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
> > a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
> > ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
> > while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
> > corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
> > to a reflection ratio of .91.
> >

> > So why do SWR meter designs have to be skewed so greatly?
> >
> >
> >
> > Jason Hsu, AG4DG
> > usenet@@@jasonhsu.com

1616. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 04:50:33 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E641D4A.1DE77049@att.net>
Source record: 37319
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Reg Edwards wrote:

> "Jimmy" wrote -
> > If you want to see the effect of tuning when SWR is high you should be
> > watching reflected power not SWR.
>
> ================================
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.

The reflected power reading serves to confirm that the antenna system is tuned and working as planned.

Other than that, I agree

Dick

1617. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 05:33:17 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <xUW8a.13581$Xh1.44921@news-server.bigpond.net.au>
Source record: 37320

J M Noeding wrote:
> On Mon, 03 Mar 2003 19:02:38 +0000, Paul Burridge
> <redscar@waitrose.notthisbit.com> wrote:
>
>> On Mon, 3 Mar 2003 16:10:30 +0100, "Fred Bartoli"
>> <fred.bartoli.nospamplease@free.removethis.fr.invalid> opined
thusly:
>>
>>>
>>> Clinton, Bush... Presidents pass, the cigars stay.
>>> Not the same ones though...
>>
>> Well, quite. That one of Clinton's was presumably unsmokable or
else
>> bloody hard to light. I somehow think flavor might have been a bit
>> tainted as well. Shame really - certainly to those of us who
>> appreciate a fine cigar and know which orifice it rightfully
belongs
>> in.
>> --
> Bush jokes are very popular over here in Europe, but they are not
> usually available in English language.
> Could somebody tell me where one could find jokes and nice pictures
of
> all the stupid things he does?
>
Not offhand, but here are a few examples of Bush's 'ouput' that
somebody sent to me.
I find it pretty scary to think somebody like this had his finger on
the button of the world's largest nulcear arsenal.... :-(

At a public address in Nashville, Tenn., in September, Bush
provided one of his most memorable stumbles. Trying to give
strength to his case that Saddam Hussein had already deceived
the West concerning his store of weapons, Bush was scripted to
offer an old saying: Fool me once, shame on you. Fool me twice,
shame on me. What came out was the following:

"Fool me once, shame ... shame on ... you." Long, uncomfortable
pause. "Fool me - can't get fooled again!"

"I want to make sure everybody who has a job wants a job."
- George Bush during his first Presidential campaign.

"If we don't succeed, we run the risk of failure."
....George W. Bush, Jr.

"When I have been asked who caused the riots and the killing in LA,
my answer has been direct & simple:

Who is to blame for the riots? The rioters are to blame.
Who is to blame for the killings? The killers are to blame.

....George W. Bush, Jr.

"You don't need to be smart to be president"
--Republican Congressman J.C. Watts - said at a February campaign
appearance on Bush's behalf. Washington Post, 6/11/00

"I think anybody who doesn't think I'm smart enough to handle the
job is underestimating."
--U.S. News & World Report, April 3, 2000

"Rarely is the question asked: is our children learning"
--Florence, SC, Jan. 11, 2000

"Actually, I -- this may sound a little West Texan to you, but I
like it. When I'm talking about -- when I'm talking about myself, and
when he's talking about myself, all of us are talking about me."
--Hardball, MSNBC, May 31, 2000

"It's clearly a budget. It's got a lot of numbers in it."
--Reuters, May 5, 2000

"I think we agree, the past is over."
--On his meeting with John McCain, Dallas Morning News, May 10, 2000

"Laura and I really don't realize how bright our children is
sometime until we get an objective analysis."
--Meet the Press, April 15, 2000

"I was raised in the West. The west of Texas. It's pretty close to
California. In more ways than Washington, D.C., is close to
California."
--Los Angeles Times, April 8, 2000

"We want our teachers to be trained so they can meet the obligations;
their obligations as teachers. We want them to know how to teach the
science of reading. In order to make sure there's not this kind of
federal cufflink."
--Fritsche Middle School, Milwaukee, March 30, 2000

"The fact that he relies on facts -- says things that are not
factual -- are going to undermine his campaign."
--New York Times, March 4, 2000

"It is not Reaganesque to support a tax plan that is Clinton in
nature."
--Los Angeles, Feb. 23, 2000

"I understand small business growth. I was one."
--New York Daily News, Feb. 19, 2000

"How do you know if you don't measure if you have a system that simply suckles kids through?"
--Explaining the need for educational accountability, Beaufort, S.C.,Feb.16, 2000

"The senator has got to understand if he's going to have he can't have it both ways. He can't take the high horse and then claim the low road."
--To reporters in Florence, S.C., Feb. 17, 2000

"If you're sick and tired of the politics of cynicism and polls and principles, come and join this campaign."
--Hilton Head, S.C., Feb. 16, 2000

"We ought to make the pie higher."
-South Carolina Republican Debate, Feb. 15, 2000

"I've changed my style somewhat, as you know. I'm less, I pontificate less, although it may be hard to tell it from this show. And I'm
more interacting with people."
--Meet The Press, Feb. 13, 2000

"I think we need not only to eliminate the tollbooth to the middle class, I think we should knock down the tollbooth."
--Nashua, N.H., as quoted by Gail Collins, New York Times, Feb. 1, 2000

"The most important job is not to be governor, or first lady in my case."
--Pella, Iowa, as quoted in the San Antonio Express News, Jan. 30, 2000"

"This is Preservation Month. I appreciate preservation. It's what you do when you run for president. You gotta preserve."
--Speaking during Perseverance Month at Fairgrounds Elementary School in Nashua, N.H.

"I know how hard it is for you to put food on your family."
--Greater Nashua, N.H., Chamber of Commerce, Jan. 27, 2000

"This is still a dangerous world. It's a world of madmen and uncertainty and potential mental losses."
--At a South Carolina oyster roast; quoted in the Financial Times, Jan.14, 2000

"There needs to be debates, like we're going through. There needs to be townhall meetings. There needs to be travel. This is a huge country."
--Larry King Live, Dec. 16, 1999

"The important question is, How many hands have I shaked?"
--Answering a question about why he hasn't spent more time in New Hampshire; quoted in the New York Times, Oct. 23, 1999

"Keep good relations with the Grecians."
--Quoted in the Economist, June 12, 1999

"When it is all said and done, I will have made more money than I ever dreamed I would make."
--Source & Date unknown (please email us the source if you know)

"I don't remember debates. I don't think we spent a lot of time debating it. Maybe we did, but I don't remember."
--On discussing the Vietnam War as an undergraduate at Yale, in the Washington Post, July 27, 1999

"Put the 'off' button on."
--South Carolina, February 14, 2000

"I did denounce it. I de-I denounced it. I denounced interracial dating. I denounced anti-Catholic bigacy... bigotry."
--Referring to his Bob Jones University visit and the subsequent criticism, Virginia, February 25, 2000

"We believe in opportunity for all Americans: Rich and poor, black and white...."
--From a speech at Bob Jones Univ., in South Carolina, 2/2/00

"We must all hear the universal call to like your neighbor just like you like to be liked yourself."
--George W. Bush puts an interesting twist on Jesus Christ's proverb:
"Love thy neighbor." (Quote is from the Financial Times)

"I would have said yes to abortion if only it was right. I mean, yeah it's right. Well no it's not right that's why I said no to it."
--South Carolina, February 14,2000

"My [tax cut] plan is realistic because it avoids meaningless 15-year projections."
--George W. Bush goes to extraordinary lengths to defend his tax cut plan. (Quote is from a Bush speech in Iowa, 12/1/99)

"The fundamental question is: 'Will I be a successful president when it comes to foreign policy?' I will be, but until I'm the president, it's going to be hard for me to verify that I think I'll be more effective."
--New York Times, 7/28/99

"There ought to limits to freedom"
--at a Press conference at the Texas State House, May 21, 1999, referring to GWBush.com

"We have struggle to not proceed but to preceed to the future of a nation's child."

--Journal Gazette 11/12/00

"My opponent seems to think that Social Security is a federal program. I believe that money is yours and you should be able to invest it yourself."
-The final Presidential debate

"Down in Washington they're playing with Social Security like it's some kind of government program!"
-NBC Nightly News (Date unknown, anyone out there know?)

"The reason we start a war is to fight a war, win a war, thereby causing no more war!"
--The first Presidential debate

"They said, 'You know, this issue doesn't seem to resignate [sic] with the people.' And I said, you know something? Whether it resignates [sic] or not doesn't matter to me, because I stand for doing what's the right thing, and what the right thing is hearing the voices of people who work.
--Portland, Ore., Oct. 31, 2000

"It's your money. You paid for it."
--LaCrosse, Wis., Oct. 18, 2000

"It's important for us to explain to our nation that life is important. It's not only life of babies, but it's life of children living in, you know, the dark dungeons of the Internet.
-Arlington Heights, Ill., Oct. 24, 2000

"If affirmative action means what I just described, what I'm for, then I'm for it."
--The Presidential Debates. St. Louis, Mo., October 18, 2000

"It's going to require numerous IRA agents."
--On Gore's tax plan, Greensboro, N.C., Oct. 10, 2000

"I don't think we need to be subliminable [sic] about the differences between our views on prescription drugs."
--Orlando, Fla., Sept. 12, 2000. He then repeatedly mispronounced the word after his press conference.

"I know the human being and fish can coexist peacefully"
--Saginaw, Mich., Sept. 29, 2000

"Will the highways on the Internet become more few?"
--Concord, N.H., Jan. 29, 2000

"It is clear our nation is reliant upon big foreign oil. More and more of our imports come from overseas."
--Beaverton, Ore., Sep. 25, 2000

"If this were a dictatorship, it'd be a heck of a lot easier...just as long as I'm the dictator..."

--Washington, DC, Dec 18, 2000, during his first trip to Washington as President-Elect

"They misunderestimated me."
--Bentonville, Ark., Nov. 6, 2000

"That's a chapter, the last chapter of the 20th, 20th, the 21st century that most of us would rather forget. The last chapter of the 20th century. This is the first chapter of the 21st century."
--On the Lewinsky scandal, Arlington Heights, Ill., Oct. 24, 2000"

"Families is where our nation finds hope, where wings take dream."
-LaCrosse, Wis., Oct. 18, 2000"

"There's a huge trust. I see it all the time when people come up to me and say, 'I don't want you to let me down again.'"
- Boston, Massachusetts, October 3, 2000

"I think if you know what you believe, it makes it a lot easier to answer questions. I can't answer your question"
--Reynoldsburg, Ohio, October 4, 2000

"You teach a child to read and he or her will be able to pass a literacy test."
--February 21, 2001 - President Bush at Townsend Elementary School, touting his education reform plans.

1618. Homebrew Website Up and Running

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 06:07:16 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <ooX8a.10172$Uy4.843831@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37321

Hi Folks,

Hi Folks,
I've got my website up and running. Some of you are
familiar with me, as a receiver designer, and have asked me to do this for a
long time. I've got all of the design information, including full size PDF
board layouts, schematics, DDS code, theory of operation, and parts
placement diagrams. The nice thing about the PDFs is that you can print
them out either on Inkjet or Laserjet transparencies, giving you a good tool
to use with photosensitized boards. I've also put up a few other things,
such as a high output RF noise source, a white noise source for audio use, a
general purpose SSB detector for use with boatanchor receivers, and a LW/MW
bandswitched active loopstick antenna. The url is:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
I want to thank all of the folks on this NG that helped me fine tune things.
Folks like Kenneth Scharf, Phil (R75 guy), Dale Parfitt, Neil Heckt of
Almost All Digital Electronics, and many others.....you've
all made this possible.
Thanks folks!!!!!!!!!!!!!!!!!!!!

Pete

1619. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 06:37:12 UTC
From: Repeating Decimal <SalmonFly@attbi.com>
Message-ID: <BA898998.45154%SalmonFly@attbi.com>
Source record: 37322
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

in article iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com, Bruce Raymond at raymondb@dma.org wrote on 3/3/03 6:35 PM:

> I'll show my ignorance here - is there a convenient way to calculate the
> temperature rise in the core that Jason originally referred to? I'd end up
> pulling out an old textbook and calculating Grashof and Nusselt numbers
> for laminar flow from a vertical plate, and then finding the thermal
> equilibrium
> point. I imagine that there's an easier method for standard components.

When the core breaks, you have reached the curie temperature.

Bill

1620. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 10:41:29 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b41vsorog1@sparta.btinternet.com>
Source record: 37323

"Doug" <janaeanddoug@netzero.net> wrote in message
news:360a820d.0303031130.5ee1801@posting.google.com...
> I havent built the receiver you are describing. But in relavence to
> the other subject on here, I think back in the tube days a direct
> conversion was called an "autodyne".

I think it was a 'homodyne'.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1621. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 11:30:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b422og$1v1$1@sparta.btinternet.com>
Source record: 37324
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Dick Carroll" wrote -
> Reg Edwards wrote:
> > "Jimmy" wrote -
> > > If you want to see the effect of tuning when SWR is high you should be
> > > watching reflected power not SWR.
> >
> > Of what possible use is swr OR reflected power to an HF amateur?
> >
> > He needs to know only whether or not the transmitter is loaded with a
> > resistance of approximately 50 ohms.
>
> The reflected power reading serves to confirm that the antenna system is
tuned
> and working as planned.
>
> Other than that, I agree
==========

Dick, well, you could hardly disagree with yourself. ;o)

The system is PLANNED to provide the transmitter with a resistive load of 50 ohms and that's all the meter is required to indicate. And the meter should be named appropriately.

As there IS no reflected power, neither is there a transmission line on which an swr can be indicated, why bother to introduce misleading fictional quantities to novices?

That's how 'old wives' tales are initiated. ;o)

Reg, G4FGQ

1622. Anyone done a Yaesu FR50B VFO modification (digital)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 14:18:21 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b42cg4$1qtgrj$1@ID-150848.news.dfncis.de>
Source record: 37325
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi. The old FR50B is quite a nice Rx. However, this budget rx needs modifications to make some needed performance improvements. Just wondering if anyone has done a digital VFO mod. I could simply put in a pretty stable VFO (capacitor tuned) and add a digital frequency counter, but I'm really wanting zero drift and precise frequency readout, and I think only a digital VFO will give me that. VFO could also tune the Tx. So, if you have done all the design and put in a digital VFO, please let me know. :c) Later on I'll probably be asking about a filter mod. I have the RadCom mod articles by G3YUQ & A8346. I need the Rx circuit diagram. I wonder if it could be emailed me. Thanks. Rich.

Email: news_emailREMOVE@ntlworld.com

Have to remove "REMOVE".

NB: Note, this post crossposted.

1623. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 14:42:46 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0303040642.44a72092@posting.google.com>
Source record: 37326

> If anyone
> knows of a supplier of liquid positive resist willing to sell to a hobbyist
> in the US, I'd like to hear from you.

Does it have to be positive resist? I know it is easier that way but
most CAD software will allow you to reverse the image. Reversing film
is also an option although not an ideal one. That being said, I have
not found a good source for negative resist. Datak sells some but it
is in a pump bottle and requires a 20 minute exposure time under two
18" black lights.
JBH

1624. FS: SB-220 HARBACH MODS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 15:43:16 UTC
From: Major Ron <majrabsr@rconnect.com>
Message-ID: <oQ39a.2285$gF3.247848@newsread1.prod.itd.earthlink.net>
Source record: 37327

NEW PARTS. PS-220 PARASITIC KIT ($27); RM-220 RECTIFIER / METERING BOARD ($30); FB-220 FILTER CAPACITOR BANK ($125); FM-221 COOLING FAN MOTOR W/ BLADE ($30); SS-220 SOFT-START MODULE ($30); SK-220 SOFT-KEY MODULE ($20); RY-220 ANTENNA RELAY ($18). TOTAL COST = $280. YOURS FOR $210 PLUS SHIPPING.

Ron, KA9ALC

1625. FS: NEW SB-220 HV TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 15:43:48 UTC
From: Major Ron <majrabsr@rconnect.com>
Message-ID: <UQ39a.2286$gF3.246813@newsread1.prod.itd.earthlink.net>
Source record: 37328

HEATH SB-220-3-7
EXTRA HD REPLACEMENT WITH 7 MIL C-CORE

CORE) B-0393/ (SIDE MOUNT) STYLE #) 10 HIPERSIL C-CORE

PR) 117/234 VAC 60 HZ HI-LO TAPS
S1) 860/1171 VAC @ 1.3A CCS
DM) HT = 6.000 WT = 6.325 DT = 6.281 MD = 3.625 MW = 4.000
PRICE) $255.00 Plus S&H FOB El Paso, TX WEIGHT) 23 LBS

NEW PETER DAHL XHD REPLACEMENT. YOURS FOR $200 PLUS SHIPPING.

Ron, KA9ALC

1626. FS: NEW SB-220 FILAMENT TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 15:44:25 UTC
From: Major Ron <majrabsr@rconnect.com>
Message-ID: <tR39a.2288$gF3.246941@newsread1.prod.itd.earthlink.net>
Source record: 37329

HEATH SB-220 FILAMENT XFMR
EXACT REPLACEMENT TRANSFORMER

CORE) EI-137 X 1.375 STYLE #) 05 E-I LAMINATED CORE

PR) 120/240 VAC 60 HZ 1 PH
S1) 5.0 VCT @ 30A CCS
S2) 90 VAC @ 0.1A CCS
DM) HT = 3.438 WT = 4.125 DT = 3.108 MD = 2.750 MW = 2.375
PRICE) $145.00 Plus S&H FOB El Paso, TX WEIGHT) 6 LBS

NEW PETER DAHL REPLACEMENT. YOURS FOR $120 PLUS SHIPPING.

Ron, KA9ALC

1627. BA1404 and 38 KHz Crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 15:51:06 UTC
From: belsbrac_belsbrac@yahoo.com
Message-ID: <294c8cb2.0303040751.26849678@posting.google.com>
Source record: 37330

OK I see a lot of people in the UK are looking for these. I might be able to provide a limited supply. If you have an interest email me. Sure you might be able to buy the crystals from the US but let's face it their shipping costs are completely out of order to the point of ripping you off. The IC's are of course obsolete, I can't promise anythign when they are gone the're gone.

1628. BA1404 and 38 KHz Crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 15:54:36 UTC
From: belsbrac_belsbrac@yahoo.com
Message-ID: <294c8cb2.0303040754.3cbd1627@posting.google.com>
Source record: 37331

OK I see a lot of people in the UK are still looking for these. I
might be
able to provide a limited supply US imports). If you have an
interest email me. Sure you might be able to buy the crystals from the
US but let's face
it their shipping costs are completely out of order to the point of
ripping you off. The IC's are of course obsolete, I can't promise
anything when they are gone they're gone.

1629. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 16:09:21 UTC
From: Fred Bartoli <fred.bartoli.nospamplease@free.removethis.fr.invalid>
Message-ID: <3e64cfa4$0$236$626a54ce@news.free.fr>
Source record: 37332

"Steve Andrew" <sjandrew@bigpond.net.au> a crit dans le message news:
xUW8a.13581$Xh1.44921@news-server.bigpond.net.au...
> J M Noeding wrote:
<snip>

> Not offhand, but here are a few examples of Bush's 'ouput' that
> somebody sent to me.
> I find it pretty scary to think somebody like this had his finger on
> the button of the world's largest nulcear arsenal.... :-(
>

Unfortunately I guess it's not him that'll have to depress the button,
otherwise we'd have nothing to be scared about.

Fred.

1630. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 16:16:31 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <och96v847d3lup804t2ii36jkjdv2vpu63@4ax.com>
Source record: 37334

On Tue, 04 Mar 2003 05:33:17 GMT, "Steve Andrew"
<sjandrew@bigpond.net.au> opined thusly:

>Not offhand, but here are a few examples of Bush's 'ouput' that
>somebody sent to me.
>I find it pretty scary to think somebody like this had his finger on
>the button of the world's largest nulcear arsenal.... :-(

We have a clown here in the UK that would give Bush a run for his
money in this respect: Bliar's deputy, John Prescott. I've seen a
compilation of some of his TV pronouncements (misquotes therefore not
possible) and it's truly jaw-dropping stuff.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1631. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 16:39:07 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <b42ks5$cq6$1@news.utelfla.com>
Source record: 37333

> Does it have to be positive resist? I know it is easier that way but
> most CAD software will allow you to reverse the image.

The problem is not the CAD package, it's the laser printer. My printer tends to "bleed" to fatter lines. If I use positive lines they'll be a little fatter, but that's OK. If I use negative lines the black bleeds to make the lines very skinny.

> Reversing film
> is also an option although not an ideal one. That being said, I have
> not found a good source for negative resist. Datak sells some but it
> is in a pump bottle and requires a 20 minute exposure time under two
> 18" black lights.

I used to have that problem with Kodak's KPR photoresist, and what was happening was that the solvent in the resist was not fully evaporating before exposure, sometimes even after waiting over night. I found that waiting several days helped, as did baking the coated board at about 120 degrees (*loooow* heat, else the resist burns) for half an hour or so. I have no idea what formulation Datak uses, so this trick may or may not work.

1632. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 18:56:03 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303041056.6d175433@posting.google.com>
Source record: 37335

"Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777> wrote in message
news:<b4197q$i59$1@news.utelfla.com>...
...
> Indeed, after some extensive
> looking I've not found a single supplier of liquid positive resist in the US
> willing to sell to a hobbyist in hobbyist quantities, although there are UK
> suppliers of the stuff (who won't ship across The Pond). In my college
> days, more years ago than I care to recall, I used to use AZ111, a positive
> photoresist that was made by the Shipley Company in Newton, MA, as well as
> Kodak KPR, which was a negative photoresist. (And yes, the solvents in both
> resists were nasty, which may explain the persistent rash I've had all these
> years... And while AZ111 was developed in a lye solution, KPR was developed
> in trichlor, which is *really* nasty.) I haven't been able to find either,
> although the negative resist I can buy appears somewhat similar to KPR. All
> the positive photoresist products I've seen that are suitable for hobbyists
> are copper-clad boards pre-sensitized with dry photoresist film. If anyone
> knows of a supplier of liquid positive resist willing to sell to a hobbyist
> in the US, I'd like to hear from you.

Well...last I checked, AZ111 was still available, though not from
Shipley. (If I'm not mistaken, Shipley was making it under license,
or perhaps even just re-selling it; I think the patents are/were
owned by Azoplate.) The problem was that it was available only in
something like a 4 or 5 liter put-up, at a bit over $1000. There was
a time when I was using enough of it that I might have gone for that
much, but now it would last me a bit too long. OTOH, if we could get
together a large enough group... But are there, say, 20 or 30 of us
out here who are serious enough about it to buy some and split an
order? And...is there perhaps a better resist available now? I mean,
AZ111 isn't nearly as sensitive as what's coated on pre-coated boards
I buy. Also, the sales guy I talked with didn't seem very willing to
help me find a different resist that would work better, but there was
an indication that some of the others could be bought in smaller
quantities. Also, I had an email exchange with a fellow who was
looking into re-selling small quantities of a different Azoplate
positive resist; he was in the Vancouver, BC, area. I think he
decided that was too much trouble, especially shipping across the
border.

I've also considered buying some negative laminating film; you can
also get photo solder mask laminating film, and it would be nice to be
able to do solder masks. But the investment in laminating equipment
has put me off so far. I don't know if the relatively inexpensive
laminating machines available in office supply stores will work, or if
you have to go with a fancier (and much more expensive) machine to get

decent results. Someone suggested to me that it might even work to iron it on, if you had an iron that would hold a constant enough temperature.

Cheers,
Tom

1633. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 20:38:10 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b432riffm1@freenet9.carleton.ca>
Source record: 37336

scharkalvin (wa2mze@bellsouth.net) writes:
> JGBOYLES wrote:
>>>What's a "direct-conversion" receiver? If you mean there's no IF
>>>involved, then nothing's converted, directly or indirectly.
>>
>> Direct conversion from rf to audio. RF mixed with Local Oscillator + filter
>> to yield audio. These have been around since the 1960's, when I guess solid
>> state mixers and amps got popular. Surprised you have never heard of them.
>> May be wrong, but direct conversion receiver applies only to solid state, not
>> the old tfr tube stuff. If I am wrong, sure someone will let me know.
>>
>> 73 Gary N4AST
>
> Many years ago (I don't remember the issue) there was an article in QST
> involving an image reject direct conversion receiver using tubes. I
> think it used a pair of 6SB7Y's. It used that old B&W audio phase shift
> network (housed in a metal tube can with an octal base) and an rf r-l-c
> phase shift network. What this is is sortof a balanced modulator run
> bassackwards to mix the incoming signal with two local oscillator
> signals 90 degrees out of phase. It generates two audio signals
> 90 degrees out of phase which are combined in the B&W network. The
> result is a single signal direct conversion receiver. There have been
> solid state versions in QST more recently, but it was first done with
> tubes. The terminology was different then, but (to quote the Bard)
> " a rose by any other name ..... " >
>
Is this a bit garbled, or have I missed something? In the May 1961
issue of QST, there is an article entitled "Balanced Detector in a TRF
Receiver". I have it, but I can't find it at the moment. It had
a stage of amplification, a balanced mixer using something like a pentode
(the 6SB7 sound about right), and it was in effect a "direct conversion"
receiver. But it didn't use phasing, so there was an audio image.

(There were of course plenty of adaptors that used phasing to get
rid of the audio image, and they could have been used this way, but
I've never come across something in the tube age, ether directly or
by reference.)

One could argue that this is the origin of modern "direct conversion",
though the article does not use that term.

Realistically, it is just a variation on a regen receiver with regen
set into oscillation. And as you, and others, have pointed out elsewhere
in this thread, there were early attempts at using such a scheme for
reception early on, and I've seen enough variation (and haven't seen

original texts) to be unable to keep track of the various names for the same basic concept.

That 1961 article seemed an attempt at reviving the concept, and isn't really a surprise with all the talk of product detectors in the magazines and hobby in the previous 15 years or so.

The origin of the term "direct conversion" seems to be "Direct Conversion -- A Neglected Technique" by Hayward and Bingham, in QST for November 1968. It uses four hot carrier diodes in a double balanced ring mixer. I believe it references the 1961 article. This did set things afire, since after that most simple receivers for a number of years were direct conversion, until there was a turn back to simple superheterodyne receivers, fueled by the interest in crystal ladder filters. Obviously the technique did not originate with transistors, though they seemed the impetus for people to play with them in recent decades, but I do not think the term was applied until after this article.

The September 1969 issue of QST had "A Direct Conversion SSB Receiver" by Richard S. Taylor. It extended the Hayward article by adding a second mixer and a B&W phase shift network, so the unwanted sideband was knocked out considerably. (There was an article in Ham Radio magazine around the same time, for a simple CW transceiver with a phasing direct conversion receiver, but I don't know if it predates this QST article.)

After the Hayward article, of course there were various attempts at making the scheme better, though all the effort went into different types of mixers. I don't think there was a major forward step until Roy Lewallen terminated the ring mixer (which admittedly had been done with mixers going to an IF) in his "Optimized QRP Transceiver" in QST for August 1980. That set the stage for Paul Breed's direct conversion phasing receiver in QST for January 1988, and Rick Campbell's various high performance direct conversion receivers in the 1990's.

Of course, the scheme is fairly common now in commercial circuits, where the scheme is used to get the signal down where an A/D converter can work for digital processing. I believe "Zero IF" is the term used in such circles.

Michael VE2BVW

1634. Re: Where do I find a UHF SWR meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 22:05:15 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <vq99a.696$Oz1.46198@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37337

http://www.coaxial.com/home_frames.htm

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
Super Low Price through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"JLB" <IHateSpam@nospam.net> wrote in message
news:iaU8a.23583$Xa4.521@fe01.atl2.webusenet.com...
> Bird Electronic Corporation http://www.bird-electronic.com/
>
> Jim
> N8EE
>
>
> "Alex" <ve3leg@hotmail.com> wrote in message
> news:3E63E865.4020107@hotmail.com...
> > I look around at SWR meters and they usually have a frequency limit of
> > like 30mhz, or at the most 200mhz. Where do I find an SWR meter for 440,
> > or even higher?
> >
>
>
>

1635. Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 22:55:37 UTC
From: K&#65533;HB <k&#65533;hb@arrl.DOTORG>
Message-ID: <J9a9a.2819$gF3.298585@newsread1.prod.itd.earthlink.net>
Source record: 37338
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc.

Just got a copy of the new league book "Experimental Methods in RF Design" ($49.95). Already found 3 new ideas for a receiver project I'm doing!

Anyone even a little interested in doing their own design work should pick up a copy.

&#65533;&#65533;&#65533; 73, de Hans, K0HB
--
SOC #291 http://www.qsl.net/soc/

1636. Re: crystal set speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 23:33:47 UTC
From: Mark <markg0usl@hotmail.com>
Message-ID: <YKa9a.1539$Z3.766@news-binary.blueyonder.co.uk>
Source record: 37340

"Michael Black" <blackm00@cam.org> wrote in message
news:6447bcd3.0302271023.32b37f2d@posting.google.com...
> "Doug" <dougmelissa@tm.net> wrote in message
news:<l0n_9.49$Bd.77621@newshog.newsread.com>...
> > A design for a crystal set calls for a 2000 ohm speaker
> > and says a smaller, 8 ohm type will not work.
> > The one for my walkman measures 26 ohms, the small
> > speaker from radio shack measures 8 ohm - measured
> > with ohmmeter (is that correct method?).
> >
> > Can someone explain why a set would work with a
> > large but not small impedance speaker?
> >
> > Finally, where can I obtain a 2000 ohm speaker?
> >
> > Thanks,
> > Doug
>
> While I was looking for something else, I came across a
> couple of references that would apply. After a month,
> and over forty replies, I'm not going back to see
> if anyone has pointed them out.
>
> The December 1997 issue of QST had an article about crystal
> radio building, "The Crystal Radio" by Dave Evison. I've
> never seen it, so I don't know how valuable it might
> be.
>
> But in the August 1998 issue, there is a letter in the
> Technical Correspondence column about the article. The
> writer pretty much dismisses the need for high impedance
> headphones. The orignal writer then responds, talking
> about how important it is, and including some bits
> about how to match the coil to the headphone's impedance.
>
> In the September 1998 issue, there is "The HZX Headphone
> Adaptor" on page 67. He describes a headphone amplifier
> using an op-amp, but makes the point that this is more
> as an impedance adaptor, to make use of readily available
> headphones, rather than an attempt at getting more sound
> out of a crystal radio. Before he gets to the circuit,
> he discusses passive solutions. And throughout the article
> he has bits about different types of headphones.
>

> Michael VE2BVW

You need a high impedance speaker because it is a high impedance circuit and a low impedance speaker will need more than the circuit has got to drive it. A crystal earpiece works well, also a LM386 amplifier works very well to bring the level up to drive a standard 8 ohm speaker

1637. FS: 48V 3.2A 150W DC Switchmode PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-04 23:36:19 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E653873.D6BB86B8@nettally.com>
Source record: 37339
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Small, light weight unit brand new $40 plus 8 shipping

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1638. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 00:31:28 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E654560.7000204@bellsouth.net>
Source record: 37341

Tom Bruhns wrote:
> "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777> wrote in message
news:<b4197q$i59$1@news.utelfla.com>...
> ...
>
>>Indeed, after some extensive
>>looking I've not found a single supplier of liquid positive resist in the US
>>willing to sell to a hobbyist in hobbyist quantities, although there are UK
>>suppliers of the stuff (who won't ship across The Pond). In my college
>>days, more years ago than I care to recall, I used to use AZ111, a positive
>>photoresist that was made by the Shipley Company in Newton, MA, as well as
>>Kodak KPR, which was a negative photoresist. (And yes, the solvents in both
>>resists were nasty, which may explain the persistent rash I've had all these
>>years... And while AZ111 was developed in a lye solution, KPR was developed
>>in trichlor, which is *really* nasty.) I haven't been able to find either,
>>although the negative resist I can buy appears somewhat similar to KPR. All
>>the positive photoresist products I've seen that are suitable for hobbyists
>>are copper-clad boards pre-sensitized with dry photoresist film. If anyone
>>knows of a supplier of liquid positive resist willing to sell to a hobbyist
>>in the US, I'd like to hear from you.
>
>
> Well...last I checked, AZ111 was still available, though not from
> Shipley. (If I'm not mistaken, Shipley was making it under license,
> or perhaps even just re-selling it; I think the patents are/were
> owned by Azoplate.) The problem was that it was available only in
> something like a 4 or 5 liter put-up, at a bit over $1000. There was
> a time when I was using enough of it that I might have gone for that
> much, but now it would last me a bit too long. OTOH, if we could get
> together a large enough group... But are there, say, 20 or 30 of us
> out here who are serious enough about it to buy some and split an
> order? And...is there perhaps a better resist available now? I mean,
> AZ111 isn't nearly as sensitive as what's coated on pre-coated boards
> I buy. Also, the sales guy I talked with didn't seem very willing to
> help me find a different resist that would work better, but there was
> an indication that some of the others could be bought in smaller
> quantities. Also, I had an email exchange with a fellow who was
> looking into re-selling small quantities of a different Azoplate
> positive resist; he was in the Vancouver, BC, area. I think he
> decided that was too much trouble, especially shipping across the
> border.
>
> I've also considered buying some negative laminating film; you can
> also get photo solder mask laminating film, and it would be nice to be

> able to do solder masks. But the investment in laminating equipment
> has put me off so far. I don't know if the relatively inexpensive
> laminating machines available in office supply stores will work, or if
> you have to go with a fancier (and much more expensive) machine to get
> decent results. Someone suggested to me that it might even work to
> iron it on, if you had an iron that would hold a constant enough
> temperature.
>
> Cheers,
> Tom

One type of resist that I have used is a blue film that you print on
with a photo copy
machine or a laser printer (positive) and then iron on to the circuit
board. You need
to use a good hot iron and clean and pre heat the copper board first.
Then when it
cools you peel off the sheet and it leaves the resist behind. It worked
good for
simple single sided boards, with care to maintain registration you might
be able
to do double sided with this. Of course you can't make vias (plated
through holes).
I forget who made this stuff, but the blue clad film was the best type.

1639. Re: Source for "copper clad" boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 00:32:21 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <uli9a.4203$l85.1378052@newsfep2-win.server.ntli.net>
Source record: 37345

> I'm looking to start dabbling with building my own RF circuits and would
> like to get a bunch of this "copper clad" material that you can solder
parts
> to for the "dirty" construction style. Where do you get this stuff
> typically? Is there a bargain-rate place somewhere to order, or is it
> pretty cheap normally? I've never seen any of it at "The Shack".
==========
I usually purchase scrap double sided fibre glass PCB by the kilogramme at
Continental European amateur radio fleamarkets .
Various sizes up to 2 by 2 feet. Excellent for making project enclosures
as well.
2 large well known flea markets in PA-land where these cut-offs are normally
available are the one at Rosmalen (Autotron site) near 's Hertogenbosch
,this year to be held on 8 March and on the last Saturday of September at
Trucker's Parking lot 'Lichtmis' north of Zwolle . There should be others in
Germany, one being the rally at Friedichshafen (Bodensee) near the border
with Switzerland , in June each year.

Frank gm0csz.kn6wh@ntlworld.com

1640. swr protection

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 00:33:56 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046824437.258561@auth2.dns.griffin.net.uk>
Source record: 37342

any thoughts on simple swr protection for 600w 2m amp...looking for info on which diodes and detection crt to use..thanks

simon g0zen

1641. 10ghz doppler gun unit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 00:40:11 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1046824812.19779@auth2.dns.griffin.net.uk>
Source record: 37343

what does the slotted plate infront of the doppler unit do??why do some have this feature and some dont??would range be increased if this window is removed..

experimenting with 10ghz for the first time..looking to build simple data/audio link to work over 5miles or so to my mates g6dhs...wont be using mixer side of doppler units..have various units sofan marconni etc..intend to use lnb plus sat can for rx..

also any homebrew 10ghz frequency counter designs??

thanks simon g0zen

1642. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 05:54:23 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0303042154.300a2b40@posting.google.com>
Source record: 37344

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20030303194726.05066.00000281@mb-fb.aol.com>...

> >> If anyone is working on this, or has bought this book and has thoughts

> about

> >> the book, I'd be real interested in the feedback.

>

> >Nice book. Shame they couldn't afford a typesetter.

>

> I was thinking about ordering this book, what is the problem with the

> typesetter? Is it unreadable?

> 73 Gary N4AST

Absolutely not. The book is excellent. It's just
the whiners who will always find something to bitch
about.

"Direct conversion" is so well established a term
(since at least 1968 - "Direct Conversion - a neglected
technique", Hayward and Bingham, QST, November 1968)
that anybody who would question the term is either
a troll or has been asleep for the past 35 years.
Of course, this *is* a ham radio newsgroup, so this
is far from a rhetorical question...

The image-reject receiver others mentioned may be
"A Direct-Conversion SSB Receiver" by Richard Taylor
W1DAX, QST, September 1969. I have it in front of me
as reprinted in Single Sideband for the Radio Amateur,
5th edition, 1970 (picked up at a flea market last
weekend). It uses a 2Q4 phase shift network in a
solid state image-reject direct conversion receiver.

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

1643. Re: swr protection

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 07:23:13 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <EbV3$6ChXaZ+EA5o@ifwtech.co.uk>
Source record: 37346

zindazenda wrote:
>any thoughts on simple swr protection for 600w 2m amp...looking for info on
>which diodes and detection crt to use..thanks

There was something by G3WZT in RadCom a few years back, as part of the
description of his solid-state 600W 6m amp. Sorry, I don't have the
exact reference to hand.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1644. RF Leakage, Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 09:05:25 UTC
From: Brian <Brian@fncwired.com>
Message-ID: <3E65BDD5.11B6B6F2@fncwired.com>
Source record: 37252

Trying to put together a special computer, we are having problems with too much RF emissions from the cabinet. The cabinet is made out of aluminum. Is there anything to be especially watchful for. Is there some

kind of device that can be used to test for hot spots of leakage.
Thanks,
Brian

1645. Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 09:41:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b44glq$1r1ddr$1@ID-150848.news.dfncis.de>
Source record: 37247
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I'm kinda being lazy at the moment asking this without doing research, but anyone know, off top of head, what kind of frequency stability I could expect from a non digital VFO. I mean a VFO capacitor tuned and using some kind of PLL /"huff and puff" circuit to maintain frequency? Maybe I don't need to build a digital VFO, and I can stick with the variable capacitor in my FR50B . I wonder if I could acheive xtal osc frequency stability. TIA. Rich.

NB: Crossposted

1646. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 11:26:36 UTC
From: Heikki Ahola <heikki.ahola@vtt.fi>
Message-ID: <3E65DEEC.A9E9D94B@vtt.fi>
Source record: 37248
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I have built 3 huff-and-puff VFO stabilizers for frequencies from 6 MHz up to 12 MHz. All seem to work adequately, even with PSK31 which is rather sensitive for frequency drift.

You should remember that the frequency can be adjusted only with steps, in my case 10 Hz is the smallest step I have tried. When properly settled, the frequency is constant within a few herz. Manual tuning with capacitor or varicap is OK, after adjustment it takes 1-2 s to reach the stabile frequency spot. You should not try to modulate the oscillator (FSK, FM) because this will ruin the operation of the stabilizer

In my opinion, this kind of device with a free-running VFO is a good substitute for a PLL with similar frequency resolution. One drawback is the number of parts required when compared with the oscillator as such. Also, the tuning sensitivity of the varicap needed seems to be a little bit critical. Values (1 kHz/V) suggested in the references should be used, otherwise the frequency may start jumping between two points as was the case in my first project. hihi.

73 de Heikki (OH2LZI)

1647. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 12:32:57 UTC
From: "Christopher.Cox" <Administrator@127.0.0.1>
Message-ID: <3E65EE5A.4020606@127.0.0.1>
Source record: 37249

Thank you Laura,

I cannot believe the number of people condescending to others because of their own ignorance on the subject. This group is usually much better than this.

I hope someone has been able to help Bert out. The only direct conversion I built so far is the MRX-80. The lack of selectivity was great coupled to a waterfall display. I saw 8 or more CW QSO's with a PSK signal, very cool.

Regards,

Christopher Cox
KC8FRJ

Laura Halliday wrote:
> jgboyles@aol.com (JGBOYLES) wrote in message news:<20030303194726.05066.00000281@mb-fb.aol.com>...
>
>
>>>>If anyone is working on this, or has bought this book and has thoughts
>>>
>
>> about
>
>
>>>>the book, I'd be real interested in the feedback.
>>>
>
>>
>
>
>>>Nice book. Shame they couldn't afford a typesetter.
>>
>
>
>>I was thinking about ordering this book, what is the problem with the
>
>
>>typesetter? Is it unreadable?
>
>
>>73 Gary N4AST
>
>

>
>
> Absolutely not. The book is excellent. It's just
> the whiners who will always find something to bitch
> about.
>
> "Direct conversion" is so well established a term
> (since at least 1968 - "Direct Conversion - a neglected
> technique", Hayward and Bingham, QST, November 1968)
> that anybody who would question the term is either
> a troll or has been asleep for the past 35 years.
> Of course, this *is* a ham radio newsgroup, so this
> is far from a rhetorical question...
>
> The image-reject receiver others mentioned may be
> "A Direct-Conversion SSB Receiver" by Richard Taylor
> W1DAX, QST, September 1969. I have it in front of me
> as reprinted in Single Sideband for the Radio Amateur,
> 5th edition, 1970 (picked up at a flea market last
> weekend). It uses a 2Q4 phase shift network in a
> solid state image-reject direct conversion receiver.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1648. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 12:55:14 UTC
From: Gary Cavie <gary@gcavie.freeserve.co.uk>
Message-ID: <MPG.18d00408733e8129896ae@news.freeserve.com>
Source record: 37250

In article <och96v847d3lup804t2ii36jkjdv2vpu63@4ax.com>,
redscar@waitrose.notthisbit.com says...
>
> We have a clown here in the UK that would give Bush a run for his
> money in this respect: Bliar's deputy, John Prescott. I've seen a
> compilation of some of his TV pronouncements (misquotes therefore not
> possible) and it's truly jaw-dropping stuff.
>

Isn't it the 'Dan Quayle' syndrome - Blair's safe from assassination,
because nobody would be stupid enough to risk Prescott taking over? ;-)

1649. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 14:30:36 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b451jt$1rejg5$1@ID-150848.news.dfncis.de>
Source record: 37251
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Heikki Ahola" <heikki.ahola@vtt.fi> wrote in message
news:3E65DEEC.A9E9D94B@vtt.fi...
> I have built 3 huff-and-puff VFO stabilizers for frequencies from 6 MHz up to 12
MHz.
> All seem to work adequately, even with PSK31 which is rather sensitive for
frequency
> drift.
>
> You should remember that the frequency can be adjusted only with steps, in my case
10 Hz
> is the smallest step I have tried. When properly settled, the frequency is constant
> within a few herz. Manual tuning with capacitor or varicap is OK, after adjustment
it
> takes 1-2 s to reach the stabile frequency spot. You should not try to modulate the
> oscillator (FSK, FM) because this will ruin the operation of the stabilizer
>
> In my opinion, this kind of device with a free-running VFO is a good substitute for
a
> PLL with similar frequency resolution. One drawback is the number of parts required
when
> compared with the oscillator as such. Also, the tuning sensitivity of the varicap
needed
> seems to be a little bit critical. Values (1 kHz/V) suggested in the references
should
> be used, otherwise the frequency may start jumping between two points as was the
case in
> my first project. hihi.
>
> 73 de Heikki (OH2LZI)
>

I guess if if I can use a variable capacitor to tune, (As oppossed to using varicap diodes) and get excellent frequency stability I ought to keep the Rx tuning capacitor. Well, that's a thought.

Is PLL different from "huff-and-puff" or are they the same technique?

(Again being somewhat lazy just at this moment).

Rich.

1650. Custom Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 15:13:22 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b4546j$1r63lc$1@ID-61331.news.dfncis.de>
Source record: 37253

I have located a UK company Airlink http://www.airlinktransformers.com/ able to wind me a custom transformer for the PSU of my all-valve 80m/20m CW/SSB tranceiver project, at what I consider to be a reasonable price, given that a transformer the size I am looking for seems to be impossible to find otherwise, new or old. The cost is substantially less in QTY 10+ so am looking for other interested parties.

These are high quality 225VA toroidal transformers with 20cm flying leads supplied with mounting hardware. The secondaries are:

2x 250V @ 250mA (for series 250-0-250 or parallel connection)
6.3V @ 10A (filament supply)
5V @ 3A (suit GZ33, GZ34 etc. rectifier filament).

Prices are:

1+ ?36.25 (US $58)
10+ ?17.21 (US $28)
25+ ?15.40 (US $25)

Postage is ?8 per box of 8 to me here in the UK. Onward shipping would be ?6.95 to UK destinations but likely to be substantially more overseas.

Anyone interested?

Hans Summers, G0UPL
http://www.HansSummers.com

1651. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 15:15:21 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b454a9$1sngat$1@ID-61331.news.dfncis.de>
Source record: 37254
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

You can read almost every article ever written about Huff Puff stabilisers here: http://www.hanssummers.com/radio/huffpuff/contents.html, plus details of my own efforts.

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b44glq$1r1ddr$1@ID-150848.news.dfncis.de...
> I'm kinda being lazy at the moment asking this without doing research, but anyone
> know, off top of head, what kind of frequency stability I could expect from a non
> digital VFO. I mean a VFO capacitor tuned and using some kind of PLL /"huff and
> puff" circuit to maintain frequency? Maybe I don't need to build a digital VFO, and
> I can stick with the variable capacitor in my FR50B . I wonder if I could acheive
> xtal osc frequency stability. TIA. Rich.
>
> NB: Crossposted
>

1652. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 15:34:46 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b455bf$1rnarq$1@ID-150848.news.dfncis.de>
Source record: 37255
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message
news:b454a9$1sngat$1@ID-61331.news.dfncis.de...
>
> You can read almost every article ever written about Huff Puff stabilisers
> here: http://www.hanssummers.com/radio/huffpuff/contents.html, plus details
> of my own efforts.

Thanks. I had to go back up the URL to see anything and saw files and folders. Get
"NOT FOUND" with the above URL.

1653. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 15:39:55 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b455l7$1sm085$1@ID-150848.news.dfncis.de>
Source record: 37256
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message
news:b454a9$1sngat$1@ID-61331.news.dfncis.de...
>
> You can read almost every article ever written about Huff Puff stabilisers
> here: http://www.hanssummers.com/radio/huffpuff/contents.html, plus details
> of my own efforts.

This works:

http://www.hanssummers.com/radio/huffpuff/contents.htm

1654. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 15:49:25 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <90p9a.2195$1v.156296@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37257

Hi Hans.

This was the post that I put out down below "Circuit from new ARRL RF Design Book" and I was hoping to find others who were dabbling with circuits in it (but the thread became an argument about what direct conversion was!).

Have you built any of the circuits in it yet, and if so which ones? I like the book too, but it is definitely not for beginners, as in the first chapter they dive right into several circuits without a whole lot of explanation. I do like the fact that there are a lot of schematics in it though, as I can research the circuits out on my own if need be. At least I have the diagrams as a starting point.

73,
Bert

1655. Re: RF Leakage, Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 16:00:04 UTC
From: Ken Knox <knox_k@operamail.com>
Message-ID: <oprlkj2eoqkx6x2g@news.midmaine.com>
Source record: 37258

On Wed, 05 Mar 2003 09:05:25 +0000, Brian <Brian@fncwired.com> wrote:

> Trying to put together a special computer, we are having problems with
> too much RF emissions from the cabinet. The cabinet is made out of
> aluminum. Is there anything to be especially watchful for. Is there some
>

With most computers, the bulk of the RF leakage is from cables entering and
leaving the cabinet, if the cabinet is properly grounded.

[..]

--
Ken Knox
N1JRO

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1656. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 16:29:44 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E6625F8.A8BA8FC8@eoni.com>
Source record: 37259

Hi Bert,
I got my EMRFD book a week or two ago; as you say it's a great book. But
remember it's supposed to be a sequel to the earlier Solid State Design
for the Amateur, not a standalone book.
Steve AA7U

Bert Herald wrote:
>
> Hi Hans.
>
> This was the post that I put out down below "Circuit from new ARRL RF Design
> Book" and I was hoping to find others who were dabbling with circuits in it
> (but the thread became an argument about what direct conversion was!).
>
> Have you built any of the circuits in it yet, and if so which ones? I like
> the book too, but it is definitely not for beginners, as in the first
> chapter they dive right into several circuits without a whole lot of
> explanation. I do like the fact that there are a lot of schematics in it
> though, as I can research the circuits out on my own if need be. At least I
> have the diagrams as a starting point.
>
> 73,
> Bert

1657. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 16:53:50 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b45a2u$5cc$1@freenet9.carleton.ca>
Source record: 37261

"Bert Herald" (bert.herald@worldnet.att.net) writes:
> Hi Hans.
>
> This was the post that I put out down below "Circuit from new ARRL RF Design
> Book" and I was hoping to find others who were dabbling with circuits in it
> (but the thread became an argument about what direct conversion was!).
>
> Have you built any of the circuits in it yet, and if so which ones? I like
> the book too, but it is definitely not for beginners, as in the first
> chapter they dive right into several circuits without a whole lot of
> explanation. I do like the fact that there are a lot of schematics in it
> though, as I can research the circuits out on my own if need be. At least I
> have the diagrams as a starting point.
>
> 73,
> Bert
>
>
To be fair, the book has only been out a few weeks. It's also
fairly expensive as a hobby book, more than the ARRL Handbook. I assume I
will get it, but at something like $75 Canadian, it's easy to put off
the purchase.

You might have been better off describing the circuit, rather than
hoping to find someone who already has the book. It sounds like
the specific circuit is fairly generic, and you might get more help
at that level.

A lot of material in ARRL books is plundered from QST articles. I
get the impression that this book, like "Solid State Design for the Radio
Amateur", is more original than many of the others, but still the
circuits may have come from elsewhere.

As someone mentioned, it isn't aimed specifically at beginners. One reason
"Solid State..." is still an appealing book a quarter century after it
came out is that it dealt with topics that weren't covered well in
the Handbook. You're probably expected to have other books on hand.

Michael VE2BVW

1658. Re: RF Leakage, Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 16:55:17 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <7qac6v4sr4g0q36bkc5giqhlp7qu0lerob@4ax.com>
Source record: 37260

On Wed, 05 Mar 2003 11:00:04 -0500, Ken Knox <knox_k@operamail.com>
wrote:

>On Wed, 05 Mar 2003 09:05:25 +0000, Brian <Brian@fncwired.com> wrote:
>
>> Trying to put together a special computer, we are having problems with
>> too much RF emissions from the cabinet. The cabinet is made out of
>> aluminum. Is there anything to be especially watchful for. Is there some
>>
>
>With most computers, the bulk of the RF leakage is from cables entering and
>leaving the cabinet, if the cabinet is properly grounded.
>
Some cases are pretty bad at this, as they have extra holes and
openings, or gaps where panels meet. You might need to add a little
bit more metal in these places (experiment with foil).

Also, make sure you use high end cables with shielding.

Monitors, CRT or LCD, can also be a source of RF.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1659. Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 17:41:35 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b45cp9$1r18d3$1@ID-150848.news.dfncis.de>
Source record: 37262
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz, or in between. Article mentions suitable commercial filters being QC1246AA or QC1246AC (made by SEI?). Do you have something in your junkbox? Ta. Rich.

Crossposted

1660. Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 19:18:37 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E664D8D.497E24E7@osite.com.br>
Source record: 37263
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi Guys,

I decided that the Hex-Beam would be a good bet for the foreseable future.
I currently own an IC-735.

The question is what are the pros and cons of bamboo and fiberglass spreaders?
I figure that I could get the bamboo spreaders at NO cost, but they will eventually rotten and break.
Fiberglass material is expensive, but the way I see it may last many years.
Then one issue arises... Would it be better to use telescoping sections of FG tubes or a solid rod would be better?

Next week I have an appointment with the FG salesman, so I may have some answers (will post on the NGs r.r.a.a and r.r.a.h)

Almost forgot to mention... I live in SE Brazil (sunny, rainy), with a possible move to NE Brazil (really sunny, quite dry) in the next months

--
Paulo E.P. Marcondes
pepm@osite.com.br

1661. virtual soundcard src?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 19:19:48 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b45il7$2mc$2@nyytiset.pp.htv.fi>
Source record: 37264

Hi,

I'd like to write a soundcard driver which uses an existing soundcard for recording, and then demodulate the audio (== I/Q demodulation done in software :-), and present it to other OS apps via a virtual sound card so the apps can "record" from that virtual card.

Is any bare-bones source code for a software based soundcards available anywhere? Or has someone already written something like this?

Thanks!

cheers,
- jfw

1662. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 19:50:30 UTC
From: mikea@mikea.ath.cx
Message-ID: <b45ke5$76l$6@puck.litech.org>
Source record: 37265
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In <b454a9$1sngat$1@ID-61331.news.dfncis.de> (rec.radio.amateur.homebrew), Hans Summers wrote:

> You can read almost every article ever written about Huff Puff stabilisers
> here: http://www.hanssummers.com/radio/huffpuff/contents.html, plus details
^^^

.htm works;
.html doesn't.

> of my own efforts.

Thanks for the website and articles, Hans.

--
A few years ago, Friday, October 14 was World Standards Day. Or, at
least, it was World Standards Day in *some* countries. However, in
America, the celebrations were held on October 11th. In Finland,
World Standards Day was marked on October 13th. Italy planned a
separate conference on standards for October 18th. - Shakib Otaqui

1663. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 19:54:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303051154.2e2f2a38@posting.google.com>
Source record: 37266
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<b451jt$1rejg5$1@ID-150848.news.dfncis.de>...
...
>
> Is PLL different from "huff-and-puff" or are they the same technique?
>
> (Again being somewhat lazy just at this moment).

So, if you are allowed to be somewhat lazy, can I also be? :-) I'm
not sure what you mean by "huff-and-puff", but for sure, a
frequency-locked-loop (what I suspect you mean by h-a-p) is not the
same as a phase locked loop. And not all PLLs are created equal, for
sure. If you run the phase comparator of the PLL at a very low
frequency so you get very close spacing of available frequencies, then
the PLL won't be able to take out phase noise at even moderate offsets
from the carrier. There are lots of tricks to get away from that
problem. I believe the "fractional-n" PLL as originally patented by
HP (C.K-S) does, for example, but it's a bit complex to implement
properly. There are several variations on the theme of multiple-loop
PLLs, too; for example, if you have something that can take 10kHz
steps, and something that can take 9.99kHz steps, the sum (or
difference) can take 10Hz steps and benefit from the much wider loop
bandwidth. But again, the complexity is likely beyond what you want.

So...to keep things simple but good performance, make a VFO oscillator
with inherently good phase noise, give it voltage control that can
take out whatever long-term drift you anticipate (that is, a very
limited voltage control range), and control it with a very simple PLL
running from a decent crystal source. Although a PLL takes a bit more
logic (more divider stages) than an FLL, it shouldn't be hard to fit
one into a single medium-size CPLD, or perhaps a small microcontroller
with a tiny bit of external logic.

Cheers,
Tom

1664. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 20:18:24 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0303051218.40417187@posting.google.com>
Source record: 37267

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20030303194726.05066.00000281@mb-fb.aol.com>...
> >> If anyone is working on this, or has bought this book and has thoughts
> about
> >> the book, I'd be real interested in the feedback.
>
> >Nice book. Shame they couldn't afford a typesetter.
>
> I was thinking about ordering this book, what is the problem with the
> typesetter? Is it unreadable?
> 73 Gary N4AST

Gary, the book is published by the ARRL, so therefore to certain folks
this means it must be inferior.

I bought the thing the day it came out. It's nothing short of
fantastic. I feel it was a well spent $49.95. You can spend a month
on chapter one just having fun building the little circuits there.

I recommend it.

1665. Re: Torroids, chokes, and other RF toys

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 20:22:51 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0303051222.13de665d@posting.google.com>
Source record: 37268

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:<0yY7a.75480$zF6.5360811@bgtnsc04-news.ops.worldnet.att.net>...
> OK, here's a final question. "The Shack" also does not stock torroids or RF
> chokes anymore (at least not that I can find). I'd like to have a grab bag
> of these and many other parts so that I can play at building various
> circuits for fun. Any suggestions of a decent supplier? Not looking to
> spend 100s of dollars, but would like to have a wide variety of parts on
> hand.
>
> Thanks,
> WF7I

Best deal going for torroids...

http://www.kitsandparts.com

W8DIZ has a huge selection in hobby builder quantities and a real nice
grab bag of various values.

1666. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 21:04:02 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b45oo8$77a$1@nyytiset.pp.htv.fi>
Source record: 37269
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
> I'll show my ignorance here - is there a convenient way to calculate the
> temperature rise in the core that Jason originally referred to? I'd end
up
> pulling out an old textbook and calculating Grashof and Nusselt numbers
> for laminar flow from a vertical plate, and then finding the thermal
> equilibrium
> point. I imagine that there's an easier method for standard components.
>
> Thanks,
> - Bruce/ND8I

If you know the core material, you can download the datasheet. There you can find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux density. With that info, you can estimate the total power loss and temperature rise. Winding losses come extra.

cheers,
- jfw

1667. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 21:11:22 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <8upc6v8opanhp15tqtuuta9q0m1pptiav0@4ax.com>
Source record: 37270
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On Wed, 5 Mar 2003 23:04:02 +0200, the renowned "Jan Wagner"
<jwagner@cc.hut.fi> wrote:

>
>"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
>news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
>> I'll show my ignorance here - is there a convenient way to calculate the
>> temperature rise in the core that Jason originally referred to? I'd end
>up
>> pulling out an old textbook and calculating Grashof and Nusselt numbers
>> for laminar flow from a vertical plate, and then finding the thermal
>> equilibrium
>> point. I imagine that there's an easier method for standard components.
>>
>> Thanks,
>> - Bruce/ND8I
>
>If you know the core material, you can download the datasheet. There you can
>find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux
>density. With that info, you can estimate the total power loss and
>temperature rise. Winding losses come extra.

I think his question was- given the mW, how do you determine the
temperature rise of the core?

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

1668. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 21:53:39 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b45rl6$8s1$1@nyytiset.pp.htv.fi>
Source record: 37271
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

"Spehro Pefhany" <speff@interlog.com> schrieb im Newsbeitrag
news:8upc6v8opanhp15tqtuuta9q0m1pptiav0@4ax.com...
> On Wed, 5 Mar 2003 23:04:02 +0200, the renowned "Jan Wagner"
> <jwagner@cc.hut.fi> wrote:
>
> >
> >"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
> >news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
> >> I'll show my ignorance here - is there a convenient way to calculate
the
> >> temperature rise in the core that Jason originally referred to? I'd
end
> >up
> >> pulling out an old textbook and calculating Grashof and Nusselt numbers
> >> for laminar flow from a vertical plate, and then finding the thermal
> >> equilibrium
> >> point. I imagine that there's an easier method for standard
components.
> >>
> >> Thanks,
> >> - Bruce/ND8I
> >
> >If you know the core material, you can download the datasheet. There you
can
> >find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux
> >density. With that info, you can estimate the total power loss and
> >temperature rise. Winding losses come extra.
>
> I think his question was- given the mW, how do you determine the
> temperature rise of the core?

Ah, ok, maybe I misunderstood... Well anyways, after estimating the core power loss, you could use the specific heat to calculate the temperature rise over time. If you're lucky, the specific heat _could_ be given in the datasheet of the material. I just had a quick look at TDK PC40 material specs for high power cores, they specified 600 J/(kg*K) as the specific heat and 420kW/m^3 100kHz 200mT. Just an example. Abraham Pressman's "Switching power supply design" went into very detailed loss analysis, IIRC, though I don't have that book at hand right now and can't check...

OTOH, it might be simpler to just test a core and see if it gets way too hot during a long term run. Then add a huge fan if necessary... ;-)

cheers,
- jfw

1669. Re: RF Leakage, Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 22:24:52 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <UOu9a.26286$Xh1.69060@news-server.bigpond.net.au>
Source record: 37272

Brian wrote:
> Trying to put together a special computer, we are having problems
with
> too much RF emissions from the cabinet. The cabinet is made out of
> aluminum. Is there anything to be especially watchful for. Is there
> some
>
> kind of device that can be used to test for hot spots of leakage.

Do a Google search for TEMPEST. That should give you everything you
need to know about shielding and testing of sealed enclosures.

Steve

1670. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 22:28:30 UTC
From: John Mortlock <abuse@global.freeserve.co.uk>
Message-ID: <b45tpc$7at$1@news7.svr.pol.co.uk>
Source record: 37273
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b45cp9$1r18d3$1@ID-150848.news.dfncis.de...
> I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz, or
in between.
> Article mentions suitable commercial filters being QC1246AA or QC1246AC
> (made by SEI?). Do you have something in your junkbox? Ta. Rich.
>
> Crossposted
>

SEI =

Salford Electrical Instruments (was part of the UK General Electric)
Times Mill Heywood
Lancashire
UK

I believe they closed down or were merged into another group several years
ago.

1671. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 23:28:08 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <cKv9a.2315$Oz1.174073@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37275

I think I have the "Solid State Design" book -- is it the one with what looks like a bunch of dominos on the cover? Kind of a brown cover and paperback? If that's the one, then I didn't feel like it was all that much better. Frankly I'm not sure the kind of book I'm looking for exists, from what I've seen. I'm looking for something which goes through lengthy explanations on various oscillator circuits, including why values are chosen as they are, what is critical and what isn't, and some circuit analysis and simulations, where they talk about impedances and so forth. For me a book which spends more time examining the fundamentals like that would be better than having lots of complicated circuits thrown at me. If you don't have a solid grasp on the fundamentals, it is difficult to add layers of complexity.

1672. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 23:50:55 UTC
From: ricknj101@hotmail.com
Message-ID: <3e668d30.34063221@news.optonline.net>
Source record: 37276

>Could somebody tell me where one could find jokes and nice pictures of
>all the stupid things he does?

The answer for any question anyone has :

www.google.com !!!!!!!!!!

1673. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-05 23:54:39 UTC
From: averyfineman@aol.com
Message-ID: <20030305185439.06165.00000010@mb-cj.aol.com>
Source record: 37277

In article <b44glq$1r1ddr$1@ID-150848.news.dfncis.de>, "Richard"
<nearlynews_email@ntlworld.com> writes:

>I'm kinda being lazy at the moment asking this without doing research, but
anyone
>know, off top of head, what kind of frequency stability I could expect from a
non
>digital VFO. I mean a VFO capacitor tuned and using some kind of PLL /"huff
and
>puff" circuit to maintain frequency? Maybe I don't need to build a digital
VFO, and
>I can stick with the variable capacitor in my FR50B . I wonder if I could
acheive
>xtal osc frequency stability. TIA. Rich.

If you use a "huff&puff" method of stabilization, you will stabilize
between the end-points of the increments of the stabilizer. It will
remain accurate to that within the incremental range plus the
reference crystal oscillator stability.

If you were to just stablize an L-C VFO without anything else in the
way of a stabilizer, you could achieve 50 PPM (Parts Per Million)
with a lot of work, patience, a frequency counter accurate to
better than 10 PPM, and a sensitive temperature sensor. As a
very rough estimate, working two hours a night, three hours a
week, you might reach 50 PPM stability over a 20 degree C
ambient in about three months. [50 PPM is a common crystal
oscillator tolerance/stability for just the crystal unit]

For stability of any L-C VFO you must begin with stable power
supplies (including heater if a tube type), fairly easy to check
with a DMM accurate to 1% or better. Next, you need to plot the
VFO L-C part internal temperature versus ambient temperature,
assuming that ambient is something like 16 C to 33 C (60 F to
90 F roughly). Then you need to find out the temperature
coefficients of the L and C components...you might be able to
do that by examination of the fixed capacitor markings, mfg
part number v. their specifications. The inductance will
probably be indeterminate/unknown as to temp coefficient.

The next thing is to arm yourself with several values of NPO
and N750 fixed capacitors which you can use to replace some
of the existing fixed capacitors. From here on it's an iterative
process of step-and-repeat, substituting a known temp coef
part, measuring the frequency versus temperature change,
calculating the overall probable capacitance change (which

will include the inductance temp coef) and trying to spot a
trend in the change versus previous check to see which way
to go.

There's a saving grace in this iterative process. The percentage
change of either L or C will change the VFO frequency by the
negative square-root of that value. It isn't proportional so you have
some leeway. As a very approximate rule, but not absolutely true,
air-core inductors increase inductance (and lower the frequency)
with increasing temperature and most fixed capacitances will
decrease with increasing temperature (and raise the frequency).
The iterative process will eventually zero-in on on a compromise
of (probably) of mix of fixed capacitors, part of which are essentially
zero tempco (NPO characteristic) and negative 750 PPM per deg
C (N750 characteristic).

Note: If this is a VFO with less than 10% tuning change versus
mean center frequency, do all of the iterative tests somewhere
near mid-frequency-range. Lock the tuning control down to keep
from adding to measurement inaccuracy. Use a calculator to
relate fixed capacitor changes to measured frequency-over-
temperature values...changes are small so at least 8-digit
calculation is a necessity.

All of the above requires a major amount of hobby time so do one
thing first: Carefully measure the existing VFO frequency at a
fixed frequency using an accurate frequency counter with variations
first of line voltage, then ambient temperature. This is a good time
for that in the northern hemisphere. Some room will be cold to let
the unit reach some low temperature thermal equilibrium. A
couple of incandescent lights shining on the cabinet can hurry
the warm-up. If the existing frequency changes are within what
you want for stability, you need not go further.

Note: 50 PPM change at 10 MHz nominal equals 500 Hz change.
50 PPM is also equal to 0.005 percent.

Len Anderson
retired (from regular hours) electronic engineer person

1674. Re: motorola msr 2000 vhf manual wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 00:25:53 UTC
From: Skipp has things on the sonic server <notmyrealaddress@yahoo.com>
Message-ID: <b464ih$q4f$4@woodrow.ucdavis.edu>
Source record: 37278

Another Shameless Plug... with some information...

The Motorola MSR-2000 was made in more versions than one might imagine... both in base station and repeater layouts.

There are three basic manuals for the MSR-2000, however, only two are required for the VHF system.

The first manual is (similar to the micor line) based on the control chassis ("backplane") and the control modules. It has an orange'ish band across the white cover. Call it the control station manual...

The second manual has VHF transmitter, receiver, rf amplifier and power supply circuit. The vhf version had a green band on the white cover. Call it the VHF RF Manual

The third manual has UHF rf equipment, the duplexer and no power supply information, the white cover has the blue band. Call it the UHF RF Manual.

You can go to the http://sonic.ucdavis.edu edu web server where I have an article on using an MSR 2000 and or Micor with an external repeater controller through simple connections via the squelch gate card. Part of the package includes the proper manual part numbers.

You can then call Motorola parts and simply order them. Or... check Ebay and try to outbid the sharks.

You can Email me from the sonic server with MSR 2000 questions as I have many MSRs in trunking, paging, conventional repeater and base applications. Yes, you read the trunking part right...

I've worked up, but not yet posted on the sonic server, the entire conversion of an MSR to an external tone panel (and or trunking controller). I've done all the homework and the mod works very very well. Mentioned controllers are the CSI-TP163 and the Comm Spec TP-3200.

I'm an Authorized Kenwood Dealer, but I support all brands as possible.

****

The MSR 2000 and the mobile mitrek use the same channel elements. You can buy surplus elements cheap from CW Wolfe Communications in Billings Montana, ask bud and tell him skipp sent you for a great price.

****

Canadian MSR-2000 units had 30 watt rated power amplifiers... you will need the Canadian MSR Manual to service the PA deck... or you can work

with a Mitrek Mobile book and a similar circuit. I've never had a 30 watt PA fail, just mis adjustment of the power control board shutting things down.

There are various versions of VHF and UHF high power amplifiers... based on power level and duty cycle. 30 watt, 110 watt and 110 watt plus, high duty cycle (the micor style).

The standard MSR 110 watt PA has an honest 40% continous duty rating... constant use will burn it up.

The continous duty VHF power amplifier is the basic Micor Repeater PA painted black... you'd be hard pressed to kill it.

Big PA killers are heat and out of band high/full power operation causing damage in specific spots. If you want the PA to last, run it at least half power into the ham bands (unless you have the pa strip originally built for the amateur band range).

OK, hope that helps... contact me through the http://sonic.ucdavis.edu web server Email icons if you have a question. I'm probably up on the MSR more than anyone else and I work cheap... buy me a cup of Joe at Dayton for most answer.

cheers
skipp

1675. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 00:27:10 UTC
From: jgboyles@aol.com
Message-ID: <20030305192710.03067.00000026@mb-cn.aol.com>
Source record: 37279

>I think I have the "Solid State Design" book --

Yes, if it says "Solid State Design" across the top, you have it.

>Frankly I'm not sure the kind of book I'm looking for exists,

You are looking for what I have been for years. A book that makes complex subjects easy to understand. I have not found a single book, but have a small library that helps.

It seems to me you are looking for an "Instant Gratification" type book, which may not exsist. You have to dig thru the references that you do have, and if you conclude that they are not enough, then look for more. Still not satisfactory, enroll in a University that teaches the lengthy explanations that you require. I don't think a ham radio publication will help you.

>'m looking for something which goes through lengthy
>explanations on various oscillator circuits, including why values are chosen
>as they are, what is critical and what isn't, and some circuit analysis and
>simulations, where they talk about

Get a college textbook on electronics, a book on switching and transient circuits, a book on high frequency transistor models, rf circuit analysis ect. I don't think you will find a single book that will cover what you want.

73 Gary N4AST

1676. Re: What is zero beat?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 02:26:56 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E66B1F0.1040500@bellsouth.net>
Source record: 37280

Bill Janssen wrote:
>
> Dan/W4NTI wrote:
>
>
>>Zero beat is when the receiver is tuned exactly dead center of the received
>>CARRIER.
>>
>>Find yourself a carrier. Say from your 'calibrator'. It should show up
>>every 100kc or some of them do it every 25.
>>
>>Turn your VFO slowly across the carrier. You will note that the frequency
>>will slowly change. If you tune it very slowly you will find a place that
>>the tone goes lower and lower until you can hear only a very low frequency
>>tone...then nothing. And as you continue to tune the tone will begin to
>>rise again.
>>
>>Zero Beat is when you hear the lowest tone.
>>
>>This can be done in either SSB or CW mode. It will not work in AM or FM
>>modes.
>>
>>Dan/W4NTI
>
>
> Don't forget that many radios shift frequency about 800 Hz when going from
> SSB to CW.
>
> Bill K7NOM
>

The bfo or carrier oscillator is placed about 200 to 400 hz outside the
band width of the
if filter. This gives an audio response of about 200-400 hz to the
filter BW+(200-400hz).
It also means you CAN'T hear the zero beat. It also gives single signal
reception on CW.
If the bfo were placed within the bw of the if filter you would hear the
zero beat, and a
little bit on the other side of zero beat. You would also not have full
reverse sideband
rejection.

Some rigs shift the carrier oscillator to offset the transmitter for cw
operation. Otherwise

one of the stations would have to retune when going from tx to rx.
Another way is to
inject a pure sine wave audio signal into the balanced modulator and key
that signal to
generate the cw carrier. This automaticly shifts the transmitter
frequency from the rx
without having to switch carrier frequencies. When shifting from LSB to
USB the LO must
shift to keep the rig tuned to the same frequency.

1677. looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 05:42:19 UTC
From: paulmcd101@hotmail.com
Message-ID: <f93f1dc3.0303052142.4245b99b@posting.google.com>
Source record: 37281

I'm looking for a HP 8568B spectrum analyzer for less
than $1500 that Ebay wants for it (and I can't stand the
way the price doubles in the last 60 seconds of an auction,
argh!).

I'm doing radio homebrewing, testing and measurement of received
HF signals to a frequency accuracy of about 10 Hz (no I don't
need the 1.5 GHz upper end of the 8568, but I need the
frequency accuracy and low noise floor at narrow BW -
that's why the HP 141T won't work).

Does anyone have one of these lying around, gathering dust,
that they'd like to part with to a budding radio engineer?
This is for personal/ham radio design use only.

I'm in Medford, Massachusetts, if that helps.

Thanks,
Paul

p.s. Yes, I already have a great dual trace Tek 7603 scope
and Tek freq counters and RF signal sources. But thanks
anyways! (Thanks, Dick! QSL?)

1678. 6:1 balun for windom antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 10:35:12 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <AvF9a.181663$YG2.5511421@twister1.libero.it>
Source record: 37282

Hello,
can anyone give me some info on 6:1 balun homebrewing?
I want to build it for a windom antenna.

Many thanks

73 de IT9VVM Vittorio

1679. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 11:56:29 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3E673867.DA7540E3@uwe.ac.uk>
Source record: 37283
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
>
> I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz, or in between.
> Article mentions suitable commercial filters being QC1246AA or QC1246AC
> (made by SEI?). Do you have something in your junkbox? Ta. Rich.
>
> Crossposted

Try http://www.golledge.com/

They are friendly and helpful and will sell one offs. Quite cheap
too. 5.2 MHz is not a standard frequency crystal, nearest is 5.120000.

vy 73

Andy, M3ABC

1680. Re: Monitoring the Iraq War

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 12:30:35 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <rkce6vgie0epon7ls2ver79cqno372g8rd@4ax.com>
Source record: 37285

On Wed, 5 Mar 2003 22:28:30 -0000, "World Listener"
<worldtrek@blueyonder.co.uk> opined thusly:

>A great new book 'Monitoring the Iraq War' has just been published giving
>the
>frequencies to monitor, background information and Internet links.
>
>Visit http://www.carapress.ip3.com/ for full details.

What sort of frequency band should we be searching? Something in the
back of my mind tells me IRO 5 or 6Mhz, but I may be way off here.
Anyone know?
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1681. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 12:35:16 UTC
From: amdx <amdx@att.net>
Message-ID: <8gH9a.2935$Oz1.244067@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37284

Our concern is not Bush's verbal fumbles, our concern is Saddam's use of weapons of mass destruction on us.

> > Could somebody tell me where one could find jokes and nice >>pictures of all the stupid things he does?

1682. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 13:39:40 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <UJWcnc3nPMfQzfqjXTWc2Q@comcast.com>
Source record: 37286

Are you sure you need that specific model. Is the 7L5 plug-in
unsatisfactory for your 7603?

"paul" <paulmcd101@hotmail.com> wrote in message
news:f93f1dc3.0303052142.4245b99b@posting.google.com...
> I'm looking for a HP 8568B spectrum analyzer for less
> than $1500 that Ebay wants for it (and I can't stand the
> way the price doubles in the last 60 seconds of an auction,
> argh!).
>
> I'm doing radio homebrewing, testing and measurement of received
> HF signals to a frequency accuracy of about 10 Hz (no I don't
> need the 1.5 GHz upper end of the 8568, but I need the
> frequency accuracy and low noise floor at narrow BW -
> that's why the HP 141T won't work).
>
> Does anyone have one of these lying around, gathering dust,
> that they'd like to part with to a budding radio engineer?
> This is for personal/ham radio design use only.
>
> I'm in Medford, Massachusetts, if that helps.
>
> Thanks,
> Paul
>
> p.s. Yes, I already have a great dual trace Tek 7603 scope
> and Tek freq counters and RF signal sources. But thanks
> anyways! (Thanks, Dick! QSL?)

1683. Wavetek 3000-200 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 14:15:17 UTC
From: pdrunen@aol.com
Message-ID: <20030306091517.12388.00000002@mb-cu.aol.com>
Source record: 37287

Hi Group,

I have a Wavetek 3000-200 signal generator which is just like the 3000/3001 units but also has the FM deviation meter.

I am not sure how to use the deviation meter, would like to get some help. I don't believe that it is working at this time.

If anyone can scan the manual page with the information on how to use the feature and the schematic of the board for this part of the 3000-200 would be of great help.

Thanks,

Paul

1684. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 14:51:48 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e6682dd$0$11824@echo-01.iinet.net.au>
Source record: 37274
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Huff and puff is a form of PLL In the case of my VFO stabilizer at

http://members.iinet.net.au/~richardh/vfostab.htm

the micro counts the freq and then outputs positive or negative pulses (huff or puff) to keep the VFO at the same count. If the VFO changes between counts by more than a certain amount (say 30-50Hz) then the micro assumes it is being tuned and waits until it is stable again before lock. This has the effect of a software lock which is invisible to the user. You get a bonus frequency display as well! This module was based on the one by Eamon Skelton in Elektor a few years back.

Richard

Richard <nearlynews_email@ntlworld.com> wrote in message news:b451jt$1rejg5$1@ID-150848.news.dfncis.de...
>
> "Heikki Ahola" <heikki.ahola@vtt.fi> wrote in message
> news:3E65DEEC.A9E9D94B@vtt.fi...
> > I have built 3 huff-and-puff VFO stabilizers for frequencies from 6 MHz up to 12
> MHz.
> > All seem to work adequately, even with PSK31 which is rather sensitive for
> frequency
> > drift.
> >
> > You should remember that the frequency can be adjusted only with steps, in my case
> 10 Hz
> > is the smallest step I have tried. When properly settled, the frequency is constant
> > within a few herz. Manual tuning with capacitor or varicap is OK, after adjustment
> it
> > takes 1-2 s to reach the stabile frequency spot. You should not try to modulate the
> > oscillator (FSK, FM) because this will ruin the operation of the stabilizer
> >
> > In my opinion, this kind of device with a free-running VFO is a good substitute for
> a
> > PLL with similar frequency resolution. One drawback is the number of

parts required
> when
> > compared with the oscillator as such. Also, the tuning sensitivity of
the varicap
> needed
> > seems to be a little bit critical. Values (1 kHz/V) suggested in the
references
> should
> > be used, otherwise the frequency may start jumping between two points as
was the
> case in
> > my first project. hihi.
> >
> > 73 de Heikki (OH2LZI)
> >
>
> I guess if if I can use a variable capacitor to tune, (As oppossed to
using varicap
> diodes) and get excellent frequency stability I ought to keep the Rx
tuning
> capacitor. Well, that's a thought.
>
> Is PLL different from "huff-and-puff" or are they the same technique?
>
> (Again being somewhat lazy just at this moment).
>
> Rich.
>

1685. Re: 6:1 balun for windom antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 15:45:10 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E676D06.6010603@wanadoo.fr>
Source record: 37288

http://www.bls.fr/amatech/electronique/radio/Baluns/Baluns.htm
http://users.erols.com/k3mt/windom/windom.htm
http://www.packetradio.com/windom.htm
http://www.qsl.net/ik0ixi/windom.html

try with http://www.google.com
words : balun windom antenna

73's
F5JTM

1686. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 16:25:43 UTC
From: davearea51@aol.com
Message-ID: <20030306112543.19561.00000008@mb-mn.aol.com>
Source record: 37289

Don't give up on eBay. I've seen them go for as low as $500 or less.

1687. Re: 6:1 balun for windom antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 16:47:47 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <TYK9a.182568$YG2.5531129@twister1.libero.it>
Source record: 37290

Thank u very much.

73 de IT9VVM Vittorio

"Serge" <poissondanlo@wanadoo.fr> ha scritto nel messaggio
news:3E676D06.6010603@wanadoo.fr...
> http://www.bls.fr/amatech/electronique/radio/Baluns/Baluns.htm
> http://users.erols.com/k3mt/windom/windom.htm
> http://www.packetradio.com/windom.htm
> http://www.qsl.net/ik0ixi/windom.html
>
> try with http://www.google.com
> words : balun windom antenna
>
> 73's
> F5JTM
>

1688. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 17:27:31 UTC
From: nordland37@hotmail.com
Message-ID: <3e6784da.12591743@news.freeserve.net>
Source record: 37291
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Thu, 6 Mar 2003 11:56:29 GMT, Andy Cowley <andy.cowley@uwe.ac.uk> wrote:

>Richard wrote:
>>
>> I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz, or in between.
>> Article mentions suitable commercial filters being QC1246AA or QC1246AC
>> (made by SEI?). Do you have something in your junkbox? Ta. Rich.
>>
>> Crossposted
>
>Try http://www.golledge.com/
>
>They are friendly and helpful and will sell one offs. Quite cheap
>too. 5.2 MHz is not a standard frequency crystal, nearest is 5.120000.

I thought he was looking for a filter (?)

Anyway, REAL amateurs dig up, cut and grind their own quartz.

--

__
\/ o\ Posted by J.
/__/ West Bank
Tweeksbury on Severn

1689. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 17:58:22 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303060617.549697d0@posting.google.com>
Source record: 37292
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Paulo Marcondes <pepm@osite.com.br> wrote in message
news:<3E664D8D.497E24E7@osite.com.br>...
> Hi Guys,
>
> I decided that the Hex-Beam would be a good bet for the
> foreseable future.
> I currently own an IC-735.
>
> The question is what are the pros and cons of bamboo and
> fiberglass spreaders?
> I figure that I could get the bamboo spreaders at NO cost,
> but they will eventually rotten and break.
> Fiberglass material is expensive, but the way I see it may
> last many years.
> Then one issue arises... Would it be better to use
> telescoping sections of FG tubes or a solid rod would be
> better?
>
> Next week I have an appointment with the FG salesman, so I
> may have some answers (will post on the NGs r.r.a.a and
> r.r.a.h)
>
> Almost forgot to mention... I live in SE Brazil (sunny,
> rainy), with a possible move to NE Brazil (really sunny,
> quite dry) in the next months

Here's a link to the primary U.S. supplier of fiberglass tubing for
ham antennas.

http://www.mgs4u.com/fiberg.htm

You might find it useful for cost comparisons. Prices are in U.S.
Dollars, dimensionss are in inches/feet, weights are pounds.

w3rv

1690. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 18:53:23 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303061053.34bd75cd@posting.google.com>
Source record: 37293

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20030305185439.06165.00000010@mb-cj.aol.com>...
> In article <b44glq$1r1ddr$1@ID-150848.news.dfncis.de>, "Richard"
> <nearlynews_email@ntlworld.com> writes:
>
> >I'm kinda being lazy at the moment asking this without doing research, but
> anyone
> >know, off top of head, what kind of frequency stability I could expect from a
> non
> >digital VFO. I mean a VFO capacitor tuned and using some kind of PLL /"huff
> and
> >puff" circuit to maintain frequency? Maybe I don't need to build a digital
> VFO, and
> >I can stick with the variable capacitor in my FR50B . I wonder if I could
> acheive
> >xtal osc frequency stability. TIA. Rich.
>
> If you use a "huff&puff" method of stabilization, you will stabilize
> between the end-points of the increments of the stabilizer. It will
> remain accurate to that within the incremental range plus the
> reference crystal oscillator stability.
>
> If you were to just stablize an L-C VFO without anything else in the
> way of a stabilizer, you could achieve 50 PPM (Parts Per Million)
> with a lot of work, patience, a frequency counter accurate to
> better than 10 PPM, and a sensitive temperature sensor. As a
> very rough estimate, working two hours a night, three hours a
> week, you might reach 50 PPM stability over a 20 degree C
> ambient in about three months. [50 PPM is a common crystal
> oscillator tolerance/stability for just the crystal unit]
...(Lots of detail deleted...)
> Len Anderson
> retired (from regular hours) electronic engineer person
I suppose that should be six hours a week, if it comes in two hours
per night increments, assuming three nights a week of work on it??

But of course, if one implemented a PLL instead, using a decent freq
ref, "one" could do it in just a few weeks of that hobby time, and
know up front that the long-term frequency stability would be the same
as the reference. Since 1ppm-over-temp references are easy to find
and not terribly expensive, that might be a decent goal*.
"Solid-State Design for the Radio Amateur" has a circuit for a
low-phase-noise LC oscillator that should do fine for the VCO, so
there's not much hobby time involved in that. And of course, if

there's an available reference design for the PLL part, that speeds things up a lot, too.

The way that the HP8640B implemented a PLL should work quite nicely for such a task: the essence is to count the frequency in a free-run mode, and when you want to lock the frequency, use the frequency count to set the "N" in a synchronous divide-by-N from the vco frequency, feeding a true phase comparator. In the early 1970's when the 8640 was designed, it took quite a few logic chips to do it, but now, doing it all in a CPLD (except for the PLL filter) should be no big deal. (Having done a couple CPLD PLLs in a slightly different context, I have a trick or two I could share if anyone is serious about trying this.)

Cheers,
Tom

* I have a few decent TCXO cans in my junque box. If there's someone in need of one for a project like this and can convince me they really are going to do it, they can have one for the postage.

1691. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 18:58:24 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303061058.5b719d1@posting.google.com>
Source record: 37294

Steve Ratzlaff <steveratz@eoni.com> wrote in message news:<3E6625F8.A8BA8FC8@eoni.com>...
> Hi Bert,
> I got my EMRFD book a week or two ago; as you say it's a great book. But
> remember it's supposed to be a sequel to the earlier Solid State Design
> for the Amateur, not a standalone book.
> Steve AA7U

Steve,

Not quite sure what you mean, "not a standalone book." The ARRL web site says it replaces "Solid-State Design for the Radio Amateur," which seems to no longer be offered, so I hope you're not meaning that one should have both. Newcomers may be out of luck!

Certainly no book is truly "standalone." All assume _some_ knowledge on the part of the reader, if not the ability to reference other specific books.

Cheers,
Tom

1692. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 19:04:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303061104.10fc7a58@posting.google.com>
Source record: 37295

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20030305192710.03067.00000026@mb-cn.aol.com>...
...
>
> Get a college textbook on electronics, a book on switching and transient
> circuits, a book on high frequency transistor models, rf circuit analysis ect.
> I don't think you will find a single book that will cover what you want.

:-) I'll agree with you on that, Gary, and I'd add, "and get a nice
set of gurus to consult." I've had the good fortune to work with some
folk who are among the very best at low-noise RF oscillator design
and implementation, and picking their brains has gotten me things that
I'm quite sure aren't written in any normally available books. But
there's a lot of experience in the ham community, and if you can tap
into it, you can sure bootstrap your learning faster than just reading
one book. r.r.a.h. is one way to do it, though you have to learn how
to separate the wheat from the chaff.

Cheers,
Tom

1693. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 19:18:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303061118.2e5a7a50@posting.google.com>
Source record: 37296

paulmcd101@hotmail.com (paul) wrote in message
news:<f93f1dc3.0303052142.4245b99b@posting.google.com>...
> I'm looking for a HP 8568B spectrum analyzer for less
> than $1500 that Ebay wants for it (and I can't stand the
> way the price doubles in the last 60 seconds of an auction,
> argh!).
>
> I'm doing radio homebrewing, testing and measurement of received
> HF signals to a frequency accuracy of about 10 Hz (no I don't
> need the 1.5 GHz upper end of the 8568, but I need the
> frequency accuracy and low noise floor at narrow BW -
> that's why the HP 141T won't work).
>
> Does anyone have one of these lying around, gathering dust,
> that they'd like to part with to a budding radio engineer?
> This is for personal/ham radio design use only.

Of course, it's not Ebay that wants the $1500, it's that the bidders
believe the equipment is worth it. If I had one "lying around
gathering dust," why would I sell it to you for significantly less
than what it would fetch on Ebay? So--there may indeed be a reason:
for example, because I thought you had talent that would be worth
contributing to, to develop. Do you really "need" one for your home
workbench? Or could you use one at, say, a nearby community college,
or on the bench of some Elmer? What if someone could loan or rent one
to you?

And...what upper frequency _do_ you want to cover? What frequency
accuracy do you need? What minimum resolution bandwidth? What
display capability? Could you do what you need with a general-purpose
non-synthesized wideband analyzer, combined with something that could
get you high-res narrow spans? (Do you already have a good
generator?) Are you willing to hack your own equipment? (There's a
lot to be learned in doing that, too!)

Cheers,
Tom

1694. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 19:30:51 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <BRyGUDBrH6Z+EwIo@ntlworld.com>
Source record: 37146
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

In message <b45cp9$1r18d3$1@ID-150848.news.dfncis.de>, Richard
<nearlynews_email@ntlworld.com> writes
>I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz,
>or in between. Article mentions suitable commercial filters being
>QC1246AA or QC1246AC (made by SEI?). Do you have something in your
>junkbox? Ta. Rich.

If I can find them, the answer is yes.

Duncan
G4ELJ
--
Support bacteria. They are the only culture some people have.

Duncan Clark

1695. speaker cable inf. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 20:11:24 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <SQN9a.5920$NX4.1431@fe06.atl2.webusenet.com>
Source record: 37097

Does anybody know of a less expensive replacement for HeilWire?
http://www.heilsound.com/Heil_Wire.htm
... seems a buck a foot is expensive!

Vic

1696. FS Xtals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 20:34:11 UTC
From: Lou <tech@dp.net>
Message-ID: <b48gp5$1pfv$1@news.dp.net>
Source record: 37098

For sale:

For experimenting or what have you.. I have "approximately" 10 crystals for sale cheap.
I got them in a lot purchase. Not sure of their intended use.

They are marked as such:

side 1: 1.78K
.1%

side 2: Vishay
7035
HP202

Can you use these? $2 each. Buy all available and I'll pay the shipping.

E-mail directly please. Thanks.
--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
Checks must clear before shipping

1697. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 20:55:21 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E67B5B9.4D6DD229@osite.com.br>
Source record: 37099
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Brian Kelly wrote:

> You might find it useful for cost comparisons. Prices are in U.S.
> Dollars, dimensionss are in inches/feet, weights are pounds.

Thanks Brian, and the other who answered.

My impressions on this project are on
http://hamstuff.blogspot.com

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

1698. An AB2 amplifier modulated.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 21:03:39 UTC
From: Mojito <Mojito@chello.nl>
Message-ID: <1103_1046984674@news.chello.nl>
Source record: 37100

Hello folks,

I was wondering, what will happen if i modulate a grounded grid AB2
amplifier with an external modulator for highpower AM.
normely class c will be used, but then the amp has to be rebuild (don't want to do that).

The amp. uses pentode tubes (EL509),so the question is can I get a modulation depth of 90
... 100%.
With this amplifier, without a lot of disortion.

I surft the net, with no results for any information, it seems nobody doesn't do it this
way. why??

So any Ideas, or better, Good information ????

WFG Mojito

1699. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 21:58:12 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e67c46f$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 37101
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hello Paulo

> My impressions on this project are on
> http://hamstuff.blogspot.com

Just want to say that a good place to look for glasfiber
roods is compagnys that is making fishing poles,
kites and ultra light aeroplanes.

Regards Max

1700. Re: An AB2 amplifier modulated.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 22:17:46 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <pOP9a.73$9w4.16@news.inreach.com>
Source record: 37102

Mojito:

To quote Bill Orr, W6SAI: "Plate modulation is the application of the audio power to the plate circuit of an r-f amplifier. The r-f amplifier must be operated class C for this type of modulation in order to obtain a radio-frequency output which changes in exact accord with the variation in plate voltage."

If you plate modulate a class AB2 mode amp, you will get distorted output. And adding class C capability shouldn't require a "rebuild" of the amp. You didn't say whether it is grid driven or cathode driven (grounded grid) but it may be possible to put it into class C with a zener diode in the cathode circuit. If grounded grid, keep in mind that much of the drive power appears in the output and unless it is also modulated, you will never achieve 100% modulation.

Roger K6XQ

1701. Re: An AB2 amplifier modulated.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 22:27:52 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <SXP9a.76$2v4.66@news.inreach.com>
Source record: 37104

Mojito:

I just re-read your post and you did say it was grounded grid. How is it biased now? Is it biased with a separate DC supply or with with some voltage dropping component in the cathode? Or perhaps zero bias (don't know if those tubes can be run that way). You will need to examine the circuit to see how to change it to class C. It may not be too hard to make it class C, but that still leaves the issue of feed through power.

Roger

1702. Re: Wavetek 3000-200 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 22:46:32 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <cdQ9a.119777$P1.7625027@news1.east.cox.net>
Source record: 37103

I believe you simple go 2 mhz above or below the signal frequency.

Pete

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20030306091517.12388.00000002@mb-cu.aol.com...
> Hi Group,
>
> I have a Wavetek 3000-200 signal generator which is just like the
3000/3001
> units but also has the FM deviation meter.
>
> I am not sure how to use the deviation meter, would like to get some help.
I
> don't believe that it is working at this time.
>
> If anyone can scan the manual page with the information on how to use the
> feature and the schematic of the board for this part of the 3000-200 would
be
> of great help.
>
> Thanks,
>
> Paul

1703. Re: An AB2 amplifier modulated.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 23:32:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b48lpu$i66$1@knossos.btinternet.com>
Source record: 37105

Plate modulation relies on the principle of class-C, grounded cathode
operation with the tube being hard driven into saturation throughout the
modulating cycle.

For low distortion modulation the plate current should be directly
proportional to plate voltage as the plate voltage swings between a low
value and almost twice the unmodulated DC value.

Typical operating angles for plate modulation are around 100 to 130 degrees.
Class-AB2 linear-amplifier operation is around 190 degrees.

To improve modulating linearity and reduce plate dissipation the screen grid
is operated at a lower than normal DC voltage and the plate RF load has a
higher value than usual.

The behaviour of plate-modulated tetrodes and pentodes can be analysed with
program TETRODE1. Setup a tuned amplifier and vary (modulate) DC plate
voltage from the keyboard while observing plate RF volts and ouput power.

Download program TETRODE1 from website below in a few seconds and run
immediately.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

1704. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-06 23:38:08 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b48m48srk1@slb6.atl.mindspring.net>
Source record: 37106
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I just looked over the 'Max' site. It is very nice and I think cheap for fiberglass. I saw a single 20 spreader for 19.95. That totals 160 bux. Plus shipping. If you order from one of the 'major' quad companies they wanted 320 bucks.

Think I found my spreaders.

Thanks guys.

Dan/W4NTI

"Max" <Max_Jens@post9.tele.dk> wrote in message news:3e67c46f$0$147$edfadb0f@dtext02.news.tele.dk...
> Hello Paulo
>
> > My impressions on this project are on
> > http://hamstuff.blogspot.com
>
> Just want to say that a good place to look for glasfiber
> roods is compagnys that is making fishing poles,
> kites and ultra light aeroplanes.
>
> Regards Max
>
>

1705. Re: FS Xtals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 00:10:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b48o0slgb1@knossos.btinternet.com>
Source record: 37107

Vishay was (perhaps still is) a manufacturer of sealed high precision wire wound resistors.

Measure resistance between terminals of your Xtls and let us know.

1706. Re: FS Xtals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 00:21:28 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e67e603$0$128$edfadb0f@dtext02.news.tele.dk>
Source record: 37108

Hello

> Vishay was (perhaps still is) a manufacturer of sealed high precision wire
> wound resistors.
>
> Measure resistance between terminals of your Xtls and let us know.

The data for the "Xtals" can be found here
http://www.vishay.com/docs/63006/hmetlab.pdf

Regards Max

1707. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 00:43:10 UTC
From: averyfineman@aol.com
Message-ID: <20030306194310.06818.00000147@mb-cl.aol.com>
Source record: 37109

In article <3e6784da.12591743@news.freeserve.net>, nordland37@hotmail.com (J.)
writes:

>On Thu, 6 Mar 2003 11:56:29 GMT, Andy Cowley <andy.cowley@uwe.ac.uk> wrote:
>
>>Richard wrote:
>>>
>>> I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz, or
>in between.
>>> Article mentions suitable commercial filters being QC1246AA or QC1246AC
>>> (made by SEI?). Do you have something in your junkbox? Ta. Rich.
>>>
>>> Crossposted
>>
>>Try http://www.golledge.com/
>>
>>They are friendly and helpful and will sell one offs. Quite cheap
>>too. 5.2 MHz is not a standard frequency crystal, nearest is 5.120000.
>
>I thought he was looking for a filter (?)
>
>Anyway, REAL amateurs dig up, cut and grind their own quartz.

Hmphhh...when I was young we whittled our own ICs out of wood.

:-)

Len Anderson
retired (from regular hours) electronic engineer person

1708. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 00:43:12 UTC
From: averyfineman@aol.com
Message-ID: <20030306194312.06818.00000148@mb-cl.aol.com>
Source record: 37110

In article <3200347.0303051154.2e2f2a38@posting.google.com>, k7itm@aol.com (Tom Bruhns) writes:

>"Richard" <nearlynews_email@ntlworld.com> wrote in message
>news:<b451jt$1rejg5$1@ID-150848.news.dfncis.de>...
>...
>>
>> Is PLL different from "huff-and-puff" or are they the same technique?
>>
>> (Again being somewhat lazy just at this moment).
>
>So, if you are allowed to be somewhat lazy, can I also be? :-) I'm
>not sure what you mean by "huff-and-puff", but for sure, a
>frequency-locked-loop (what I suspect you mean by h-a-p) is not the
>same as a phase locked loop.

Well, it is and isn't. :-) The "huff and puffs" (Brit term, I believe) is a _stabilizer_ for a normally-manual-tuning variable oscillator. The basic "huff and puff" holds frequency within a relatively narrow frequency range but specific frequency indication is not part of the basic concept (although it could be added easily).

Hans Summers nice website has a number of articles on the "huff and puffs" available for downloading...including his own application. See his previous message in here.

Stabilizers are in a sort of "interim" category, one that bridges only-manually-variable continuously-tuned oscillators to keeping that quality but allowing rather good stabilization at small increments of tuning. Since "huff and puffs" don't involve the artifacts and aliases of DDS (they are essentially as noise-free, artifact-free as simple LC oscillators), they are easier to apply in homebrew projects. They don't need wide-range or high-resolution spectrum analysis to check them out.

>And not all PLLs are created equal, for
>sure. If you run the phase comparator of the PLL at a very low
>frequency so you get very close spacing of available frequencies, then
>the PLL won't be able to take out phase noise at even moderate offsets
>from the carrier.

As an aside, I will challenge that "phase noise" charge. :-)

If one is involved in CDMA, QPSK, M-ary Whatever Alphabets, phase noise will affect signal quality and BER and stomach acid quantities. Today's industrial-strength datasheets

emphasize phase noise specifications because that is what the BIG-volume IC purchasers are concerned about. Given that the USA has roughly 100 million cellular telephones in use now, that scope and size and market profit potential is going to drive what is important in certain datasheets.

Few radio amateurs are into cellular telephony applications, BER values, etc., etc. Frequency source phase noise will affect certain FM applications in amateur work, now done at VHF or above. It might, but not absolutely, be of some technical importance at very narrow bandwidth moonbouce applications using CW on 6 meters.

A single loop PLL will work just fine at small increments, say 10 Hz. Trouble of a different sort arises on trying to rapidly tune quickly. The control loop time constants must be down in the 0.3 second ranges for 10 Hz control increments and the divider chain has to be longer by the inverse of the frequency increment. One can build a 1 Hz increment PLL and not worry overly much on phase noise. That is fine for a very fixed frequency control application.

Multiple-loop PLLs get around the problem by having each multiple controlled at much higher increments, say 1 KHz as is common in the Icom family of 1980s-to-mid-1990s. Those loops "nest" by division-by-ten and mixing with next-higher loops. Manual (or computer-controlled) tuning is much faster, no noticeable lag in knob-twiddling fast or slow, yet the controlled increments are very small. Those are complex and must be chosen carefully to avoid intermods from certain harmonic products, noise build-up from many loops, etc.

The Direct Digital Synthesis group of controlled sources takes in most of the "fractional-N" types and the "NCOs" or Numerically Controlled Oscillators (a technical misnomer but a catchy trade term). Very little hardware there compared to mulitple-loop PLLs and one can, definitely, control quickly to very small increments of frequency over a relatively wide tuned frequency span. While it is relatively simple in number of parts, certain DDS design constants must be very strict to avoid aliasing and weird artifacts not readily found in PLLs and certainly not in simple L-C frequency sources. DDSs are not intuitive in operation, absolutely need some kind of microprocessor assistance (usually on board DDS ICs). Once a DDS subsystem has been worked out in the lab, it is a nice profit-maker for a fast-control, small-increment frequency source manufacturer.

>So...to keep things simple but good performance, make a VFO oscillator
>with inherently good phase noise, give it voltage control that can
>take out whatever long-term drift you anticipate (that is, a very
>limited voltage control range), and control it with a very simple PLL

>running from a decent crystal source. Although a PLL takes a bit more
>logic (more divider stages) than an FLL, it shouldn't be hard to fit
>one into a single medium-size CPLD, or perhaps a small microcontroller
>with a tiny bit of external logic.

An ordinary L-C continuously-variable VFO shouldn't be counted out. In the old Heathkit "SB" series of kits, I measured (a couple decades ago) the frequency stability at 29 MHz of less than 125 PPM overall over a cold-soak at 58 F to an hours-later hot ambient of 92 F. The VFO, common in that line at 5.5 to 5.0 MHz, drifted less than 250 PPM by itself, locked to 5.35 MHz.* The second harmonic of 5.35 MHz falls at 10.7 MHz, the standard IF for old FM broadcast receivers...which can be used to to measure ALL of the incidental FM with some care and calibration. Nothing was heard/seen that seemed worthwhile to note on any incidental FM at that time. No PLL, no DDS, just a crystal oscillator and the L-C tuning VFO, all in a kit and not designed in Iowa. That VFO was a sub-contracted assembly quite frequency-linear in tuning.

It is quite possible to achieve stability in frequency and a very minimum of "noise" with simple L-C oscillator frequency sources, but the designer has to WORK to achieve that.

Len Anderson
retired (from regular hours) electronic engineer person

* 125 PPM = 3.6 KHz at 29 MHz; 250 PPM = 1.3 KHz at 5.35 MHz. Two separate measurements, closed circuit. First measured transceiver output frequency stability at 29 MHz. Second measured just the VFO output through a pickup loop and amplified in a 20 db lab amplifier, VFO not disconnected.

1709. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 00:50:45 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Ux2cnToSk7k0cPqjXTWcow@comcast.com>
Source record: 37111

Speaking of this, you can purchase a HP3856 Selective Level Meter (receiver)
for about nothing.

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0303061118.2e5a7a50@posting.google.com...
> paulmcd101@hotmail.com (paul) wrote in message
news:<f93f1dc3.0303052142.4245b99b@posting.google.com>...
> > I'm looking for a HP 8568B spectrum analyzer for less
> > than $1500 that Ebay wants for it (and I can't stand the
> > way the price doubles in the last 60 seconds of an auction,
> > argh!).
> >
> > I'm doing radio homebrewing, testing and measurement of received
> > HF signals to a frequency accuracy of about 10 Hz (no I don't
> > need the 1.5 GHz upper end of the 8568, but I need the
> > frequency accuracy and low noise floor at narrow BW -
> > that's why the HP 141T won't work).
> >
> > Does anyone have one of these lying around, gathering dust,
> > that they'd like to part with to a budding radio engineer?
> > This is for personal/ham radio design use only.
>
> Of course, it's not Ebay that wants the $1500, it's that the bidders
> believe the equipment is worth it. If I had one "lying around
> gathering dust," why would I sell it to you for significantly less
> than what it would fetch on Ebay? So--there may indeed be a reason:
> for example, because I thought you had talent that would be worth
> contributing to, to develop. Do you really "need" one for your home
> workbench? Or could you use one at, say, a nearby community college,
> or on the bench of some Elmer? What if someone could loan or rent one
> to you?
>
> And...what upper frequency _do_ you want to cover? What frequency
> accuracy do you need? What minimum resolution bandwidth? What
> display capability? Could you do what you need with a general-purpose
> non-synthesized wideband analyzer, combined with something that could
> get you high-res narrow spans? (Do you already have a good
> generator?) Are you willing to hack your own equipment? (There's a
> lot to be learned in doing that, too!)
>
> Cheers,
> Tom

1710. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 01:54:01 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E67FBBF.7C610FD1@silverstar.com>
Source record: 37112
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc.

Or find any of the Two Volume 1985 Motorola RF Device Data manuals having, in Vol. 2, complete construction information in AR305 with PCB masters, parts lists, interstage construction information, schematics and parts component layout. AR305 is for a 150W out, 10 MHz to 175 MHz no-tune amp which fits in a 1" x 1" x 1" project box exclusive of the COR. AR313 is for a 300W out amp using a MRF141G.

1711. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 01:54:49 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <JZS9a.3982$Oz1.310917@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37113

> :-) I'll agree with you on that, Gary, and I'd add, "and get a nice
> set of gurus to consult."

Tom,

I agree with you that Gurus are of MUCH value. Internet "gurus" are sometimes hostile and of questionable knowledge, I've found. I do have one guru friend. His knowledge, especially practical "get it working" knowledge is wide and vast, but he stops short of any spice or mathematical treatments of circuits. I need another guru or two to fill that void.

I wish there was a guru network or something to hook you up with local elmers who are willing to spend time with novice experimenters. Does such a thing exist? I know there are organizations of retired business professionals who lend their free time and advice to people who want to start their own businesses, so it can't be that hard to achieve.

73,
Bert

1712. FA: HAM STUFF ON EBAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 02:13:39 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <nfT9a.4740$1v.327564@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37114

AIR-DUX COIL ASSEMBLY
DRAKE MP 6JB6'S
MANUALS: HQ, TEN-TEC, AMERITRON
JOHNSON STANDOFFS X 4
DOW KEY COAXIAL RELAY
5691 RED BASE X 4
DOUGHNUT TYPE KNOBS X 3

All under seller heytubeguy

1713. Re: speaker cable inf. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 02:22:56 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303061822.6e39a953@posting.google.com>
Source record: 37115

"Vic" <nospam@bogusaddress.com> wrote in message
news:<SQN9a.5920$NX4.1431@fe06.atl2.webusenet.com>...
> Does anybody know of a less expensive replacement for HeilWire?
> http://www.heilsound.com/Heil_Wire.htm
> ... seems a buck a foot is expensive!

If it's for _speaker_ cable as the subject line suggests, I'd say that ordinary zip cord would be fine. Maybe $0.10 per foot (+/-, depending on gauge, etc.) at a local hardware store? YMMV and you're bound to get other opinions. What that web site brought up for me was balanced, shilded mic cable, and if it's good quality cable, a buck a foot for small quantities doesn't sound outrageous to me. OTOH, if you don't need the flexibility and a rugged jacket on the cable, I'm sure you can find cheaper. What are the important characteristics in your application?

Cheers,
Tom

1714. Re: speaker cable inf. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 03:21:26 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <sdU9a.21510$7Z4.4605@fe08.atl2.webusenet.com>
Source record: 37116

Greetings Tom,

What I'm wanting to do is run approx 20' of cable for an amplified speaker (12 watts). Of course the speaker would require it's
audio input (two wires) and it needs 12v DC (two wires), total of four wires.

I am not sure if I'd need shielded cable or not. My inclination was to use shielded to help insure no RF got into the audio. The
HeilWire concept looks great but I'm open to suggestions from those who know as to what's good wire to use and if RF should be a
concern with a long speaker extension!

Vic

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0303061822.6e39a953@posting.google.com...
> "Vic" <nospam@bogusaddress.com> wrote in message
news:<SQN9a.5920$NX4.1431@fe06.atl2.webusenet.com>...
> > Does anybody know of a less expensive replacement for HeilWire?
> > http://www.heilsound.com/Heil_Wire.htm
> > ... seems a buck a foot is expensive!
>
> If it's for _speaker_ cable as the subject line suggests, I'd say that
> ordinary zip cord would be fine. Maybe $0.10 per foot (+/-, depending
> on gauge, etc.) at a local hardware store? YMMV and you're bound to
> get other opinions. What that web site brought up for me was
> balanced, shilded mic cable, and if it's good quality cable, a buck a
> foot for small quantities doesn't sound outrageous to me. OTOH, if
> you don't need the flexibility and a rugged jacket on the cable, I'm
> sure you can find cheaper. What are the important characteristics in
> your application?
>
> Cheers,
> Tom

1715. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 03:49:03 UTC
From: paulmcd101@hotmail.com
Message-ID: <f93f1dc3.0303061949.19133d32@posting.google.com>
Source record: 37117

Thanks for all the responses.

I didn't go for the Tek 7L5 because of the 5 MHz upper limit. See why later in this email.

k7itm@aol.com (Tom Bruhns) wrote in message
> Of course, it's not Ebay that wants the $1500, it's that the bidders
> believe the equipment is worth it.

Of course.

>If I had one "lying around
> gathering dust," why would I sell it to you for significantly less
> than what it would fetch on Ebay? So--there may indeed be a reason:
> for example, because I thought you had talent that would be worth
> contributing to, to develop.

For your hatred of Ebay and hope for the next generation of radio designers who will actually use your 8568b and not resell it at 100% profit.

I got an SP-600 advertising the exact same way. A guy (Hi Dick!) in the next town had a MINT SP-600 that was literally gathering dust. He read my post and emailed me. He knew I'd use it, and I do, every night (usually for dusk-enhancement/greyline and sometimes dawn-enhancement).

I listen to the SP-600 more than the Drake R8. Better filters and sound. I usually use the R8 to check which freq the Sp-600 is really tuned to. But I need the R8 because hauling the SP-600 for a car mini-DXpedition to Rockport (on the sea shore) is a pain. :-) And the R-390 may be better, but changing freqs is such a pain (literally, wrist pain). So I scan with the SP-600, and zoom in on the r-390, if need be. And yes, I could tap the Sp-600 LO and use my freq counter, but I don't like messing with antiques that are in great shape.

BIG QUESTION:
I want to know why my R-390 non-A can hear stuff that my Drake R8 can't, given the R-390 non-A came out in the early 1950's, and the R8 in the early 1990's.

>Do you really "need" one for your home
> workbench?

It would be the rock of my test equipment collection, against which I would check everything else. I've got the 7603 scope, several sig generators (Tek and Marconi), etc. Now I check everything by

zero-beating everything against 10 MHz WWV on the scope.

>Or could you use one at, say, a nearby community college,
> or on the bench of some Elmer?

I live about a mile from Tufts, where I attended and taught as a TA. They had spec analyzers of 400 kHz max freq range. I need higher (see below).

If an elmer wants to lend me one or let me go to his/her place, that would be great. Anyone step to the plate?

>What if someone could loan or rent one
> to you?

Loan would be great. Rent might be tough due to employment status. Hence the "extra time" to devote to radio design at home.

> And...what upper frequency _do_ you want to cover?

I'd like to cover at least upto 120 MHz, which is for the DDS running at 120 MHz, then divide by 4, for my top HF freq of 30 MHz.

>What frequency
> accuracy do you need? What minimum resolution bandwidth?

As much as I can get. I have to check for spurs everywhere.

I'm following KE9OA'a and Youngblood's work closely.

I was already in a group making our own receivers at a military radio place near Boston. One guy's mantra said "preselectors are cheating", regarding dynamic range and strong signal overloading. That's the caliber of the work. But they made mil-radios that were onesies and twosies used for very special purposes. And allegedly did better than the r-390 (and r-1051/r-2368?) at dynamic range and strong signal overload, but incredibly expensive. Unfortunately, the company went under. The radio-making-group fell apart when one started talking money for the radios we would make for the commercial market. I'm more of a GNU guy (see GNUradio). Pay for hardware, and software is free and fun.

>What
> display capability? Could you do what you need with a general-purpose
> non-synthesized wideband analyzer, combined with something that could
> get you high-res narrow spans? (Do you already have a good
> generator?)

I'd need to sweep near zero to at least 200 MHz for spurs etc in a possible design (again, see ke9oa and Youngblood). Put it on peak-hold, and let it sit there for hours or days, while changing freqs, voltages, etc. I want high-res BW throughout at least 200 MHz. I want the LO phase noise as low as I can get it (crystal-like, or at least like AOR-7030), to minimize IMD. If there's another method, let

me know. If any high frequency junk gets into the DSP and aliases, I'm screwed.

This is probably more than you wanted to know, but shows you why I'd like a HP 8568B. We used the HP 8568b (and HP 8569, higher freq brother) at the mil-radio place, which had at least 5 of them. Don't know where they went when the company went under, dammit.

Any other comments on how to attack this problem would be greatly appreciated.

Thanks,
Paul

1716. Re: 10ghz doppler gun unit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 04:08:28 UTC
From: hexter@blazenet.net
Message-ID: <v6g6psgicvf1f3@corp.supernews.com>
Source record: 37118

In article <1046824812.19779@auth2.dns.griffin.net.uk>, zen@lineisp.co.uk
says...
>
>what does the slotted plate infront of the doppler unit do??why do some have
>this feature and some dont??would range be increased if this window is
>removed..
>
>experimenting with 10ghz for the first time..looking to build simple
>data/audio link to work over 5miles or so to my mates g6dhs...wont be using
>mixer side of doppler units..have various units sofan marconni etc..intend
>to use lnb plus sat can for rx..
>
>also any homebrew 10ghz frequency counter designs??
>
>thanks simon g0zen
>

In some cases, the slotted plate is an aperature coupling/isolating
device which is only partialy coupling input/output energy. The reason
for this reduction and seemingly inefficeint device is that gunn oscillators
pull in frequency like crazy with differant variations of loading.

In some cases the slotted device you see may be a bandpass type of filter
to reduce interferance.

Best luck, (Radarman)

1717. Re: speaker cable inf. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 04:27:01 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <7o7g6vsde2fm5clmu9rdeanp5f9s0em54c@4ax.com>
Source record: 37119

On Thu, 6 Mar 2003 22:21:26 -0500, "Vic" <nospam@bogusaddress.com>
wrote:

>Greetings Tom,
>
>What I'm wanting to do is run approx 20' of cable for an amplified speaker (12 watts). Of course the speaker would require it's
>audio input (two wires) and it needs 12v DC (two wires), total of four wires.
>
>I am not sure if I'd need shielded cable or not. My inclination was to use shielded to help insure no RF got into the audio. The
>HeilWire concept looks great but I'm open to suggestions from those who know as to what's good wire to use and if RF should be a
>concern with a long speaker extension!
>
If your DC isn't clean, you could have some noise issues with the DC
wiring so close to your audio wiring.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1718. Re: FS Xtals - ERROR

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 06:00:44 UTC
From: Lou <tech@dp.net>
Message-ID: <b49iue$23lm$1@news.dp.net>
Source record: 37120

OOOPPPPSSSS..... When I acquired these, I took a quick glance at them. They looked like crystals, so rather than investigate further - even though the markings were a bit weird to me to be crystals, I threw them in a box marked crystals and left them go at that. MY ERROR....

Thanks to a couple people who pointed this out and corrected me as to the manufacturer of these and their lines. Personally, I've never heard of the company.

Anyhow, since I stand corrected these are still up for sale, if any one needs any. Obviously the price will be different too! If interested, make a decent offer and I'll get back to you. Please reply direct as I'm not always able to receive the news groups.

One more reason among many lately for me to get my glasses changed!!!!!!!!

Thanks again fellas!

--
Lou/Tech@DP.NET

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e67e603$0$128$edfadb0f@dtext02.news.tele.dk...
> Hello
>
> > Vishay was (perhaps still is) a manufacturer of sealed high precision
wire
> > wound resistors.
> >
> > Measure resistance between terminals of your Xtls and let us know.
>
> The data for the "Xtals" can be found here
> http://www.vishay.com/docs/63006/hmetlab.pdf
>
> Regards Max
>
>

1719. WTB: 2N5641 and 2N5642 TR

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 06:40:44 UTC
From: youngkim@yksystems.com
Message-ID: <ecc0cb9c.0303062240.1d4a0fc6@posting.google.com>
Source record: 37121

I am looking for both transistors. I bought TS700S from honest(?) ham
who said the radio worked perfect and found out that both driver and
final is dead.And this honest ham accused me that I destroyed it. I
only connected to dummy load and pressed the mic see if it worked. hi
hi
Can't seem to find the exact part or replacement. I think RF parts
sells them but asking arm and leg.
Anybody has these parts for reasonable price?
Thanks for reading.

1720. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 06:51:52 UTC
From: averyfineman@aol.com
Message-ID: <20030307015152.04841.00000435@mb-cp.aol.com>
Source record: 37122

In article <3200347.0303061053.34bd75cd@posting.google.com>, k7itm@aol.com (Tom Bruhns) writes:

>averyfineman@aol.com (Avery Fineman) wrote in message
>news:<20030305185439.06165.00000010@mb-cj.aol.com>...
>> In article <b44glq$1r1ddr$1@ID-150848.news.dfncis.de>, "Richard"
>> <nearlynews_email@ntlworld.com> writes:
>>
>> >I'm kinda being lazy at the moment asking this without doing research, but
>> anyone
>> >know, off top of head, what kind of frequency stability I could expect
>from a
>> non
>> >digital VFO. I mean a VFO capacitor tuned and using some kind of PLL
>/"huff
>> and
>> >puff" circuit to maintain frequency? Maybe I don't need to build a
>digital
>> VFO, and
>> >I can stick with the variable capacitor in my FR50B . I wonder if I could
>> acheive
>> >xtal osc frequency stability. TIA. Rich.
>>
>> If you use a "huff&puff" method of stabilization, you will stabilize
>> between the end-points of the increments of the stabilizer. It will
>> remain accurate to that within the incremental range plus the
>> reference crystal oscillator stability.
>>
>> If you were to just stablize an L-C VFO without anything else in the
>> way of a stabilizer, you could achieve 50 PPM (Parts Per Million)
>> with a lot of work, patience, a frequency counter accurate to
>> better than 10 PPM, and a sensitive temperature sensor. As a
>> very rough estimate, working two hours a night, three hours a
>> week, you might reach 50 PPM stability over a 20 degree C
>> ambient in about three months. [50 PPM is a common crystal
>> oscillator tolerance/stability for just the crystal unit]
>...(Lots of detail deleted...)
>> Len Anderson
>> retired (from regular hours) electronic engineer person
>I suppose that should be six hours a week, if it comes in two hours
>per night increments, assuming three nights a week of work on it??
>
>But of course, if one implemented a PLL instead, using a decent freq
>ref, "one" could do it in just a few weeks of that hobby time, and

>know up front that the long-term frequency stability would be the same
>as the reference. Since 1ppm-over-temp references are easy to find
>and not terribly expensive, that might be a decent goal*.

Heh...I'm not wanting to start a flambe' a la newsgroup, but
I've had to do a lot of searching for those easy-to-find,
not terribly expensive 1 PPM or better references. Closest I
can come in reasonable prices for a new unit is an
ECS VC-TXO-39SM at 10 MHz in an SMD package, costing
$15.12 in singles from Digi-Key (in the web catalog, not in
newsprint mailed version). That's a voltage-controlled crystal
oscillator which is intended for a replacement frequency
counter as the timebase master oscillator. That ECS model
number family has several fixed frequencies from 10 to 19 MHz.

>"Solid-State Design for the Radio Amateur" has a circuit for a
>low-phase-noise LC oscillator that should do fine for the VCO, so
>there's not much hobby time involved in that. And of course, if
>there's an available reference design for the PLL part, that speeds
>things up a lot, too.

Quite true, no argument, but there are mitigating conditions to
everyone's homebrew project. I would judge a "huff and puff"
system to least disturb an existing VFO/VCO yet provide a
good stabilization of its frequency. It isn't optimum. Optimum
criteria have to be defined by the homebrewer.

A "huff and puff" system automatically creates FM/PM "noise"
in that basic method. But, that "noise" can easily be tolerated
in-use either as Tx or Rx. It would be terrible for a high-speed
data communication system using Costas loops and I-Q demod
or mod. Works fine for CW or DC SSB AM on MF-HF bands.

For small increments of tuning over a relatively large tuning span,
a DDS is hard to beat for a least-parts subsystem and it can
yield excellent stability on each setting. On the other hand it is
a more complex task to control the divisors and fractions
thereof and to find the least spur/artifact/alias/whatever conditions
to not mess up an Rx or Tx. Analog Devices has some nice
Appnotes on that subject on their website. Once that is done,
each of tens of thousands of frequencies will be as stable as the
reference frequency source.

A composite of mixing large-increment PLL frequencies with a
fixed-range, stabilized VFO can generate frequencies on all the
MF-HF bands, either for Tx or Rx. For a new project, I'd judge
that to have the least design-and-build overall work...without
having to spend all the test time with the VFO.

Single-loop PLLs are basically simple, the R-C loop filter
equations are out there. At least one LSI, the Motorola
MC145151, is still sold by Jameco and contains the PLL

oscillator, divider, phase-comparator, and reference frequency input (choice of crystal reference oscillator in-board or out-board). Add the VFO and a mixer, perhaps an L-C filter(s), and a multiband tunable frequency source is done.

There's a lot of options to choose from...

Len Anderson
retired (from regular hours) electronic engineer person

1721. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 07:22:02 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <uMX9a.4445$Oz1.346292@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37123

One way around this problem is with a low frequency analyzer, such as the
3582, using a clean signal source with a mixer to translate the frequency
down. The HP 70000 Phase Noise test system that we used at Rockwell-Collins
used this setup. A 3585 was used out to a 40MHz offset, while the 3582
would do the close-in stuff. The system could measure down to -154dBc. We
used to use this system for characterizing OCXOs when I was working in the
Synthesizer Group. I know that it is cumbersome, but it could work, if you
have a clean signal generator to use as an LO source. I think one of the
best generators available was the HP 8642 series. They used that modulated
fractional N divider
(MFD, Sigma-Delta Modulation), ending up with a phase noise spec
of -153dBc.
Sorry about the rambling! A 3580 would do the trick in your case, along
with a Mini-Circuits SRA-3 mixer.

Pete

paul <paulmcd101@hotmail.com> wrote in message
news:f93f1dc3.0303061949.19133d32@posting.google.com...
> Thanks for all the responses.
>
> I didn't go for the Tek 7L5 because of the 5 MHz upper limit. See why
> later in this email.
>
> k7itm@aol.com (Tom Bruhns) wrote in message
> > Of course, it's not Ebay that wants the $1500, it's that the bidders
> > believe the equipment is worth it.
>
> Of course.
>
> >If I had one "lying around
> > gathering dust," why would I sell it to you for significantly less
> > than what it would fetch on Ebay? So--there may indeed be a reason:
> > for example, because I thought you had talent that would be worth
> > contributing to, to develop.
>
> For your hatred of Ebay and hope for the next generation of radio
> designers who will actually use your 8568b and not resell it at 100%
> profit.
>
> I got an SP-600 advertising the exact same way. A guy (Hi Dick!) in
> the next town had a MINT SP-600 that was literally gathering dust. He
> read my post and emailed me. He knew I'd use it, and I do, every night
> (usually for dusk-enhancement/greyline and sometimes
> dawn-enhancement).

>
> I listen to the SP-600 more than the Drake R8. Better filters and
> sound. I usually use the R8 to check which freq the Sp-600 is really
> tuned to. But I need the R8 because hauling the SP-600 for a car
> mini-DXpedition to Rockport (on the sea shore) is a pain. :-) And the
> R-390 may be better, but changing freqs is such a pain (literally,
> wrist pain). So I scan with the SP-600, and zoom in on the r-390, if
> need be. And yes, I could tap the Sp-600 LO and use my freq counter,
> but I don't like messing with antiques that are in great shape.
>
> BIG QUESTION:
> I want to know why my R-390 non-A can hear stuff that my Drake R8
> can't, given the R-390 non-A came out in the early 1950's, and the R8
> in the early 1990's.
>
> >Do you really "need" one for your home
> > workbench?
>
> It would be the rock of my test equipment collection, against which I
> would check everything else. I've got the 7603 scope, several sig
> generators (Tek and Marconi), etc. Now I check everything by
> zero-beating everything against 10 MHz WWV on the scope.
>
> >Or could you use one at, say, a nearby community college,
> > or on the bench of some Elmer?
>
> I live about a mile from Tufts, where I attended and taught as a TA.
> They had spec analyzers of 400 kHz max freq range. I need higher (see
> below).
>
> If an elmer wants to lend me one or let me go to his/her place, that
> would be great. Anyone step to the plate?
>
> >What if someone could loan or rent one
> > to you?
>
> Loan would be great. Rent might be tough due to employment status.
> Hence the "extra time" to devote to radio design at home.
>
> > And...what upper frequency _do_ you want to cover?
>
> I'd like to cover at least upto 120 MHz, which is for the DDS running
> at 120 MHz, then divide by 4, for my top HF freq of 30 MHz.
>
> >What frequency
> > accuracy do you need? What minimum resolution bandwidth?
>
> As much as I can get. I have to check for spurs everywhere.
>
> I'm following KE9OA'a and Youngblood's work closely.

>
> I was already in a group making our own receivers at a military radio
> place near Boston. One guy's mantra said "preselectors are cheating",
> regarding dynamic range and strong signal overloading. That's the
> caliber of the work. But they made mil-radios that were onesies and
> twosies used for very special purposes. And allegedly did better than
> the r-390 (and r-1051/r-2368?) at dynamic range and strong signal
> overload, but incredibly expensive. Unfortunately, the company went
> under. The radio-making-group fell apart when one started talking
> money for the radios we would make for the commercial market. I'm more
> of a GNU guy (see GNUradio). Pay for hardware, and software is free
> and fun.
>
> >What
> > display capability? Could you do what you need with a general-purpose
> > non-synthesized wideband analyzer, combined with something that could
> > get you high-res narrow spans? (Do you already have a good
> > generator?)
>
> I'd need to sweep near zero to at least 200 MHz for spurs etc in a
> possible design (again, see ke9oa and Youngblood). Put it on
> peak-hold, and let it sit there for hours or days, while changing
> freqs, voltages, etc. I want high-res BW throughout at least 200 MHz.
> I want the LO phase noise as low as I can get it (crystal-like, or at
> least like AOR-7030), to minimize IMD. If there's another method, let
> me know. If any high frequency junk gets into the DSP and aliases, I'm
> screwed.
>
> This is probably more than you wanted to know, but shows you why I'd
> like a HP 8568B. We used the HP 8568b (and HP 8569, higher freq
> brother) at the mil-radio place, which had at least 5 of them. Don't
> know where they went when the company went under, dammit.
>
> Any other comments on how to attack this problem would be greatly
> appreciated.
>
> Thanks,
> Paul

1722. Re: FS Xtals - ERROR

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 09:40:55 UTC
From: Isacc Newman <john.smith@micro$oft.com>
Message-ID: <b49pftpmv1@newstree.ericsson.se>
Source record: 37125

> Anyhow, since I stand corrected these are still up for sale, if any one
> needs any. Obviously the price will be different too! If interested, make
a
> decent offer and I'll get back to you. Please reply direct as I'm not
always
> able to receive the news groups.

But do you still have any crystals for sale?

h a r r y v p o (at) h o t m a i l (dot) c o m

1723. Re: FS Xtals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 09:45:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6gqhalcojuj58@corp.supernews.com>
Source record: 37124

Lou wrote:

>. . .

> --
> Lou/Tech@DP.NET
>
> C.L. Furlong Enterprises
> P.O. Box 289
> 514 Railroad St.
> Stockdale, PA 15483
> Phone: 724-938-7808
> E-Mail: Tech@DP.NET
>
> Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
> Gifts and More: Gift items & Fundraisers.
> . . .

I'm kind of interested in FCC Licenses. What kinds do you sell?

Roy Lewallen, W7EL

1724. Re: Custom Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 09:52:26 UTC
From: Isacc Newman <john.smith@micro$oft.com>
Message-ID: <b49q5g$q32$1@newstree.ericsson.se>
Source record: 37127

> These are high quality 225VA toroidal transformers with 20cm flying leads
> supplied with mounting hardware. The secondaries are:
>
> 2x 250V @ 250mA (for series 250-0-250 or parallel connection)
> 6.3V @ 10A (filament supply)
> 5V @ 3A (suit GZ33, GZ34 etc. rectifier filament).
>
> Prices are:

Hi Hans (nice Swedish name),
Are you seriously going to pay these prices? If you want a 100% replacement transformer then Ok, but it is still a lot ot pay. I would be tempted to:

1. Get a 500W 120/220v autotransformer and rewind it/add windings (the primary is already there).
2. Use more than one transformer (230 to 230v isolation + 6.3v etc.)
3. Rob one from another bit of kit.

If I had 50+ bucks to spare I would have a much better home for it that a US transformer manufacturers profit margin.

BR SM0VPO (find me on the web, somewhere)

1725. Re: swr protection

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 09:58:36 UTC
From: Isacc Newman <john.smith@micro$oft.com>
Message-ID: <b49qh3$q97$1@newstree.ericsson.se>
Source record: 37126

Try a simple OpAmp DC voltage comparator.

Reflected DC rectified voltage from VSWR meter . via 10K pot to Op-Amp +ve input.

Forward DC rectified voltage from VSWR meter . via 10K pot to Op-Amp -ve input.

Adjust the two pots for the right fail ratio.

Op-Amp OP switches HIGH when reflected power (sense voltage) exceeds the preset percentage of the forward power (sense voltage) as selected by the 10K pot ratios.

Use Op-Amp to energise relay/disable supplies/mute oscillators/energise motor to drag out the mains power plug/etc.

1726. Re: BA1404 and 38 KHz Crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 10:17:50 UTC
From: Isacc Newman <john.smith@micro$oft.com>
Message-ID: <b49rl5qqe1@newstree.ericsson.se>
Source record: 37128

The BA1404 is only really popular 'cause of the internal stereo encoder. Otherwise people would be happy with something like the http://w1.859.telia.com/~u85920178/tx/v7b_proj.htm 400mW project (bit complicated), or perhaps the http://w1.859.telia.com/~u85920178/tx/bug5.htm 10mW project (too simple). It is my opinion that the BA1404 should be left in obscurity since the RF side of it is SO unstable it is alsmost unuseable for more than a few minutes.

One would be far better to use a decent stand-alone stereo encoder, such as the http://home.intekom.com/jean/fm_stereo.htm which doesn't even use a crystal or transducer to get the 38KHz. The output of this could then be connected to a decent and stable transmitter. The encoder just uses a couple of Op-Amps and a "slack handfull" of resistors. By the way, those 40KHz transduces you get in Halfords ultrasonic car alarms have a bandwidth of +/-2.5KHz. This means that they can easily be made to scillate at 38KHz.

I hope to have a PCB available for a similar OpAmp encoder, but it uses fewer amps/stages and is based on a 4.870MHz crystal ($1 each - got a lot of them). So if the stereo encoder were available, then why would anyone in their right mind want the BA1404?

BR

1727. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 13:03:50 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <bdCcnfEbX5rkBPWjXTWcog@comcast.com>
Source record: 37129

If you someone in your ham club has the past couple QEX issues (I think starting 3 issues ago) they discuss the problems of adjacent channel rejection -- and the problems relating to modern synthesized receivers.

"paul" <paulmcd101@hotmail.com> wrote in message news:f93f1dc3.0303061949.19133d32@posting.google.com...
> Thanks for all the responses.
>
> I didn't go for the Tek 7L5 because of the 5 MHz upper limit. See why
> later in this email.
>
> k7itm@aol.com (Tom Bruhns) wrote in message
> > Of course, it's not Ebay that wants the $1500, it's that the bidders
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> Of course.
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> >If I had one "lying around
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> For your hatred of Ebay and hope for the next generation of radio
> designers who will actually use your 8568b and not resell it at 100%
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> Hence the "extra time" to devote to radio design at home.
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> Any other comments on how to attack this problem would be greatly
> appreciated.
>
> Thanks,
> Paul

1728. Re: Custom Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 13:50:44 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b4a83l$1ub6i9$1@ID-61331.news.dfncis.de>
Source record: 37130

Hi Harry

I'm English though despite the Swedish name! Always causes confusion not least because my XYL is Swedish and we visit a lot.

I live in the UK and the transformer manufacture is also in the UK. If I can get the 10+ price, £17.21 seems reasonable. Even compared to what I would spend trying to make up the voltages with separate transformers etc. A 250VA toroidal from Farnell costs £27.43, and that's without all the extra secondaries. Modifying an existing one by winding etc scared me, sounds like a lot of work and I don't know how to do it.

The other option was back to back transformers but I need the double HT secondaries so I can connect them in series for 250-0-250 so I can use a GZ33 full-wave rectifier tube.

I still find it hard to see how I could beat this price any other way unless I find a suitable old transformer, which I've so far failed to do.

Of course I need more orders to make up 10 <hint>

73

Hans
http://www.HansSummers.com

"Isacc Newman" <john.smith@micro$oft.com> wrote in message news:b49q5g$q32$1@newstree.ericsson.se...
> > These are high quality 225VA toroidal transformers with 20cm flying leads
> > supplied with mounting hardware. The secondaries are:
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> Hi Hans (nice Swedish name),
> Are you seriously going to pay these prices? If you want a 100% replacement
> transformer then Ok, but it is still a lot ot pay. I would be tempted to:
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> 1. Get a 500W 120/220v autotransformer and rewind it/add windings (the
> primary is already there).
> 2. Use more than one transformer (230 to 230v isolation + 6.3v etc.)

> 3. Rob one from another bit of kit.
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> If I had 50+ bucks to spare I would have a much better home for it that a
US
> transformer manufacturers profit margin.
>
> BR SM0VPO (find me on the web, somewhere)
>
>

1729. DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 14:10:01 UTC
From: Torbj&#65533;rn Morka <tmorka@online.no>
Message-ID: <XK1aa.35169$Rc7.493339@news2.e.nsc.no>
Source record: 37131

Are there kit's available for this ?

Torbjorn.

1730. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 15:02:41 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E68B491.F93BBC39@osite.com.br>
Source record: 37132
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dan/W4NTI wrote:
>
> I just looked over the 'Max' site. It is very nice and I think cheap for
> fiberglass. I saw a single 20 spreader for 19.95. That totals 160 bux.
> Plus shipping. If you order from one of the 'major' quad companies they
> wanted 320 bucks.

Ii¿½ve found a local fiberglass company... 1" OD solid rods
are
USD 4.53/ meter (USD 1.38/ft). I haven't asked them about
shipping charges, but since they are in the same city, it
may be even free.
--
Paulo E.P. Marcondes
pepm@osite.com.br

1731. Re: DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 16:00:14 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e68c207$0$125$edfadb0f@dtext02.news.tele.dk>
Source record: 37133

Hello Torbj&#65533;rn

> Are there kit's available for this ?

Yes, many. What is you looking for ?

Regards Max

1732. Re: DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 16:22:29 UTC
From: Torbj&#65533;rn Morka <tmorka@online.no>
Message-ID: <7H3aa.29948$CG6.477925@news4.e.nsc.no>
Source record: 37134

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e68c207$0$125$edfadb0f@dtext02.news.tele.dk...
> Hello Torbj&#65533;rn
>
> > Are there kit's available for this ?
>
> Yes, many. What is you looking for ?
>
> Regards Max
>
>

Something in the area 14-30Mhz ?

1733. Re: DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 16:56:35 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3E68CF43.129415B3@pt.uu.net>
Source record: 37136

Got one from: http://www.rf-kits.demon.co.uk/dds3.htm
photo here: http://www.qsl.net/ct2gqv/images/hf-tranceiver-dds2.jpg
and here the front panel layout:
http://www.qsl.net/ct2gqv/images/hf-tranceiver-dds.jpg
You can set "IF" value by programing.

"Torbjï¿½rn Morka" wrote:
>
> "Max" <Max_Jens@post9.tele.dk> wrote in message
> news:3e68c207$0$125$edfadb0f@dtext02.news.tele.dk...
> > Hello Torbjï¿½rn
> >
> > > Are there kit's available for this ?
> >
> > Yes, many. What is you looking for ?
> >
> > Regards Max
> >
> >
>
> Something in the area 14-30Mhz ?

73 de CT2GQV
--
Ricardo Martins

1734. Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 16:57:23 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <E34aa.9971$Dp.446@fe01.atl2.webusenet.com>
Source record: 37135

I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless' magazine. Unfortunately, the even numbered pages, where the date would be, is all advertisements, so no date! Also, unfortunately, the last page of the article is lost, which would include the conclusions and bibliography.

This article describes a voltage (well, actually current) controlled inductor that can be used in an RF oscillator. The basic idea is to wind two coils on a magnetic core, like a high turns ratio transformer. One coil is the 'normal' inductor in the RF oscillator. A DC current is then applied to the other coil. The frequency of the oscillator can then be controlled with the amount of DC current.

I have tried searching the web for more information, but have not found anything. The key word in the article is 'transductor', and I have found other things called this but not what what this article describes.

Anyone know any more about this, or know a web site? The pages I have do have some interesting photographs comparing the output of two oscillators, one controlled with a varicap and one controlled with the 'transductor'. The one with the transductor has a lot less spurious output.

Jim
N8EE

1735. Re: DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 17:58:40 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e68ddc9$0$119$edfadb0f@dtext02.news.tele.dk>
Source record: 37137

Hello Torbj&#65533;rn

> Something in the area 14-30Mhz ?

http://www.sseng.com/

http://www.minikits.com.au/kits4.html

Regards Max

1736. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:06:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303071006.72cb2c6@posting.google.com>
Source record: 37138

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20030307015152.04841.00000435@mb-cp.aol.com>...

> Heh...I'm not wanting to start a flambe' a la newsgroup, but
> I've had to do a lot of searching for those easy-to-find,
> not terribly expensive 1 PPM or better references.

No flame, just some possible ways to help you (and lurkers) out in the search for stable reference oscillators... A fellow in the UK used to post offers here for some decent reference oscillators at very attractive prices; they were some power-of-2 frequency (i.e., something like 2^14*1kHz, if I recall correctly, or maybe it was 2^20*10Hz). You'd have to accomodate the freq, but the price seemed right to me. I suppose it's possible he still has a source of them. And you can get a Dallas/Maxim DS32kHz TCXO, +/- 2ppm max over 0-40C, as a sample or for $6.95 in singles. Also, you may have noticed the offer in my posting. Admittedly, you have to put up with a very limited set of available frequencies, but for me that beats trying to implement my own TCXO or oven! ;-o -- I also note that you can get very tight tempco crystals from places like International, but they are a bit pricey.

It seems like accomodating some semi-random frequency isn't much of a problem, given the ease of division by arbitrary N up through at least the HF frequencies. A key would be continued availability, if you wanted to make several copies over a span of time, or make a design easily available to others. To that end, the DS32kHz seems a good choice, provided you can use the 32.768kHz output frequency without too much trouble.

Cheers,
Tom

1737. Re: DDS `?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:10:02 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v6ho9aepcud145@corp.supernews.com>
Source record: 37140

I recently built the 9850 DDS based on the Far Circuits board. Not a kit, but the parts are pretty easy to collect and it probably cost a tenth of Sheldon's kit:

http://www.qsl.net/wb8rcr/AD9850.html

Might be a little tougher to get things like shaft encoders and PICs in Norway but I can't believe it's all that difficult. Even with a fancy, backlit LCD I think I have less than $30 in parts, less than 1/6 of the cost of the Hands kit, (assuming the pound is about where I think it is.)

NJQRP had a page on it with some suggestions and modifications to the filter from the QST article but I can't seem to find that page right now.

NJQRP also has a little daughtercard for implementing a DDS to your specs
http://www.njqrp.org/dds/

..

"Ricardo Martins" <ricardo.martins@pt.uu.net> wrote in message
news:3E68CF43.129415B3@pt.uu.net...
> Got one from: http://www.rf-kits.demon.co.uk/dds3.htm
> photo here: http://www.qsl.net/ct2gqv/images/hf-tranceiver-dds2.jpg
> and here the front panel layout:
> http://www.qsl.net/ct2gqv/images/hf-tranceiver-dds.jpg
> You can set "IF" value by programing.
>
>
> "Torbj&#65533;rn Morka" wrote:
> >
> > "Max" <Max_Jens@post9.tele.dk> wrote in message
> > news:3e68c207$0$125$edfadb0f@dtext02.news.tele.dk...
> > > Hello Torbj&#65533;rn
> > >
> > > > Are there kit's available for this ?
> > >
> > > Yes, many. What is you looking for ?
> > >
> > > Regards Max
> > >
> > >
> >
> > Something in the area 14-30Mhz ?
>
> 73 de CT2GQV

> --
> Ricardo Martins

1738. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:10:14 UTC
From: troglodite@aol.com
Message-ID: <20030307131014.04774.00000097@mb-mq.aol.com>
Source record: 37139

>This article describes a voltage (well, actually current) controlled
>inductor that can be used in an RF oscillator. The basic idea is to wind
>two coils on a magnetic core, like a high turns ratio transformer. One coil
>is the 'normal' inductor in the RF oscillator. A DC current is then applied
>to the other coil. The frequency of the oscillator can then be controlled
>with the amount of DC current.
>
>I have tried searching the web for more information, but have not found
>anything. The key word in the article is 'transductor', and I have found
>other things called this but not what what this article describes.
>
>Anyone know any more about this, or know a web site? The pages I have do
>have some interesting photographs comparing the output of two oscillators,
>one controlled with a varicap and one controlled with the 'transductor'.
>The one with the transductor has a lot less spurious output.

Jim,

What you describe is a normal property of just about any inductor using some form of ferrite core. The devices were also called "Increductors" and were widely used in service-grade sweep generators. There is no inherent reason why oscillators with varicaps or saturable cores should behave differently, except perhaps at the extremes of frequency shift. If you don't need a lot of range, I'd experiment with ordinary ferrite toroid cores or cup cores.

1739. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:17:15 UTC
From: mikea@mikea.ath.cx
Message-ID: <b4annb$3nf$2@puck.litech.org>
Source record: 37141

JLB <IHateSpam@nospam.net> wrote:
> I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless'
> magazine. Unfortunately, the even numbered pages, where the date would be,
> is all advertisements, so no date! Also, unfortunately, the last page of
> the article is lost, which would include the conclusions and bibliography.

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> inductor that can be used in an RF oscillator. The basic idea is to wind
> two coils on a magnetic core, like a high turns ratio transformer. One coil
> is the 'normal' inductor in the RF oscillator. A DC current is then applied
> to the other coil. The frequency of the oscillator can then be controlled
> with the amount of DC current.

> I have tried searching the web for more information, but have not found
> anything. The key word in the article is 'transductor', and I have found
> other things called this but not what what this article describes.

> Anyone know any more about this, or know a web site? The pages I have do
> have some interesting photographs comparing the output of two oscillators,
> one controlled with a varicap and one controlled with the 'transductor'.
> The one with the transductor has a lot less spurious output.

Search also on "saturable reactor". These used to feature prominently
in power supply regulation for some military gear, and I expect that
the idea can be applied to the RF arena.

--
"Shub-Internet, Great Beast of a Thousand Processes, Avatar of Line Noise and
Imp of Call Waiting, the hideous multi-tendriled entity formed of all the
manifold connections of the Internet. Often depicted as a serpentine beast
with three heads: Eater-of-Posts, Beast-of-Flamewar, and the Deallocator." --
Alistair J.R. Young

1740. Re: FS Xtals - ERROR

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:17:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4anns$b2a$1@knossos.btinternet.com>
Source record: 37142

> But do you still have any crystals for sale?
>
=====================

Only untested parts available from this shop.

1741. Re: speaker cable inf. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:35:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303071034.5d0acf8f@posting.google.com>
Source record: 37143

"Vic" <nospam@bogusaddress.com> wrote in message
news:<sdU9a.21510$7Z4.4605@fe08.atl2.webusenet.com>...
> Greetings Tom,
>
> What I'm wanting to do is run approx 20' of cable for an amplified speaker (12 watts). Of course the speaker would require it's
> audio input (two wires) and it needs 12v DC (two wires), total of four wires.
>
> I am not sure if I'd need shielded cable or not. My inclination was to use shielded to help insure no RF got into the audio. The
> HeilWire concept looks great but I'm open to suggestions from those who know as to what's good wire to use and if RF should be a
> concern with a long speaker extension!

Actually, the first thing that comes to my mind in the way of problems is "ground loop." If the 12V power that you feed to that remote speaker also powers something else near the source of the audio, you may end up with power trying to go through your audio cable, and that could be a problem. If the 12V is isolated, used only to power that remote speaker, it shouldn't be a problem. You can accomplish the same effect by transformer-isolating the audio on either end. And you should plan to run two conductors for the power, and two separate ones for the audio.

If the audio you are feeding the remote speaker is fairly high level and from a low impedance source (like an amplifier output), there's likely no need for any fancy wiring. But you might not know till you actually try it. If you don't mind having two cables, it will probably be cheapest to do it that way instead of looking for a cable with four conductors and then finding out that you needed to have the audio conductors shielded... BTW, I'd go for minimum 18 gauge for the 12V wiring.

Cheers,
Tom

1742. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 18:45:25 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303071045.394afd84@posting.google.com>
Source record: 37144

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:<JZS9a.3982$Oz1.310917@bgtnsc05-news.ops.worldnet.att.net>...
> > :-) I'll agree with you on that, Gary, and I'd add, "and get a nice
> > set of gurus to consult."
>
> Tom,
>
> I agree with you that Gurus are of MUCH value. Internet "gurus" are
> sometimes hostile and of questionable knowledge, I've found. I do have one
> guru friend. His knowledge, especially practical "get it working" knowledge
> is wide and vast, but he stops short of any spice or mathematical treatments
> of circuits. I need another guru or two to fill that void.
>
> I wish there was a guru network or something to hook you up with local
> elmers who are willing to spend time with novice experimenters. Does such a
> thing exist? I know there are organizations of retired business
> professionals who lend their free time and advice to people who want to
> start their own businesses, so it can't be that hard to achieve.

Actually, Bert, there used to be just such a thing! I had forgotten
about it. Anyone know if it still exists, and how to access it? Best
I can do with a Google search is this, which talks about it being on
indefinite hold: http://www.novia.net/~pschleck/elmers/

BTW, I'd also say that sometimes a guru tries to be helpful but for
whatever reason, just isn't able to communicate with you. Someone
else may understand him very well, but for some reason, the connection
just doesn't work with you. So in that case, don't blame the guru,
just find another with whom you resonate better.

Cheers,
Tom

1743. Shortened antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 19:03:12 UTC
From: Torbj&#65533;rn Morka <tmorka@online.no>
Message-ID: <O16aa.35255$Rc7.498568@news2.e.nsc.no>
Source record: 37145

A beam, length total 1/2 wave, where 70% is wounded on a piece of tube, say
50 mm dia ?
Is this useable ?

Torbjorn.
(50 cm bare wire, coil, 150cm wire, feed, 150cm wire, coil, 50cm wire)
Frequency planned is 3700Khz...

1744. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 19:27:35 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4aroo$1thedo$1@ID-150848.news.dfncis.de>
Source record: 37197
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Duncan Clark" <NEWS@[127.0.0.1]> wrote in message
news:BRyGUDBrH6Z+EwIo@ntlworld.com...
> In message <b45cp9$1r18d3$1@ID-150848.news.dfncis.de>, Richard
> <nearlynews_email@ntlworld.com> writes
> >I'm seeking a 5.2 Mhz crystal filter with bandwith about 2.5 or 3Khz,
> >or in between. Article mentions suitable commercial filters being
> >QC1246AA or QC1246AC (made by SEI?). Do you have something in your
> >junkbox? Ta. Rich.
>
> If I can find them, the answer is yes.
>
> Duncan
> G4ELJ
> --
> Support bacteria. They are the only culture some people have.
>
> Duncan Clark

Duncan

Rog.

In a mod article for the Yaesu FR50B it says put in a xtal filter in the first IF chain to cure intermod. Actually I notice that if the bandwidth is 3Khz that would be setting the audio bandwidth as well as curing intermod. You could never have a bandwidth greater than 3Khz. Anyhow, if you come across something you could give me a call. Email is:

news_emailREMOVE@ntlworld.com

Remove "REMOVE".

Thanks.

Rich.

1745. Re: Shortened antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 20:15:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4aul0$9de$1@sparta.btinternet.com>
Source record: 37198

If you are looking for help with design of a short, helically-wound,
1/2-wave dipole, resonant at 3.7 MHz, then download program MIDLOAD.

Wound on short plastic tube. 50mm tube diameter is OK. You choose tube
length and overall length. Wind with thick low-loss wire. Program computes
all dimensions, wire diameter, number of turns, tube length, length of
tuning rods, etc.

Tuned to exact frequency by pruning the wires or rods extending from ends of
coil. Can be fed by ladder line or coax using link-coupling over centre of
coil.

Download in a few seconds program MIDLOAD from website below. Run
immediately.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

==========

"Torbj&#65533;rn Morka" <tmorka@online.no> wrote in message
news:O16aa.35255$Rc7.498568@news2.e.nsc.no...
> A beam, length total 1/2 wave, where 70% is wounded on a piece of tube,
say
> 50 mm dia ?
> Is this useable ?
>
> Torbjorn.
> (50 cm bare wire, coil, 150cm wire, feed, 150cm wire, coil, 50cm wire)
> Frequency planned is 3700Khz...
>
>

1746. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 20:21:52 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E68FF60.A3F01356@osite.com.br>
Source record: 37199
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi guys,

Dave has emailed me in PVT, and I liked his thoughts very
much.
Maybe one may come to this point after reading the whole
thread, but this was the earlier reply (I think).
Obviously he has given me permission to repost his email to
the NG.
On another mail, he also said he liked Yuri's idea of
coating the bamboo spreaders with latex driveway paint...

well, to Dave's reply:

Subject: Re: Spreader materials for Hex-Beam
Date: 5 Mar 2003 19:48:31 -0000
From: "Dave Platt" <dplatt@radagast.org>

<snip header>

>The question is what are the pros and cons of bamboo and
>fiberglass spreaders?
>I figure that I could get the bamboo spreaders at NO cost,
>but they will eventually rotten and break.

True 'nuff. If you do use bamboo, you would probably want
to dry it
well, and then apply a couple of coats of a good outdoor
varnish.
This would probably extent its lifetime by quite a bit by
sealing out
moisture. Probably best to varnish it _after_ bending it to
shape and
installing the wires, so that the varnish doesn't crack.

>Fiberglass material is expensive, but the way I see it may
>last many years.

Also true _if_ it's shielded from sunlight.

You might want to build one out of bamboo to see how well it
works for
you. This would reduce the cost of making mistakes during
construction and would give you more of a chance to make
adjustments.

Then, if it works well in practice, you could rebuild in
fiberglass
(either immediately, or when you first decide/need to do
some rework
on the antenna for other reasons).

>Then one issue arises... Would it be better to use
>telescoping sections of FG tubes or a solid rod would be
>better?

Telescoping sections will need some additional work at the
overlap
points. In this respect, rods would be simpler.

On the other hand, rods would probably be heavier for any
given amount
of stiffness.

>Almost forgot to mention... I live in SE Brazil (sunny,
>rainy), with a possible move to NE Brazil (really sunny,
>quite dry) in the next months

Rain will be hard on the bamboo.

Sunshine will be hard on both. I've been told that
fiberglass exposed
to direct sunlight will age fairly quickly.

Spraypainting the spreaders with an opaque sun-resistant
outdoor paint
after installing the wires would probably be a very good
idea. A
black enamel spraypaint would do the job (and would also
make the
antenna somewhat less visible).

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

1747. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 20:36:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6i0mv3orqgv81@corp.supernews.com>
Source record: 37200

I haven't tried it myself, so can give only a few suggestions. One would be to use a toroidal ferrite core -- toroid because the lack of a gap in the magnetic path will make saturation easier, and ferrite because it saturates much more easily than powdered iron. You'll want to use one of the 60 - series, high frequency ferrites or equivalent to get decent Q. The current will obviously have to be very clean to avoid FM, just like you need to use a very clean voltage for a varicap. And you'll have to have a good way to decouple the control current from the RF. I doubt that the temperature stability would be very good, and you're very likely to have hysteresis due to residual magnetism -- returning the current to zero won't produce the same frequency as you got before applying current. These might be tolerable in a closed loop system like a PLL, but probably not in a free-running VFO.

Good luck. Let us know what you find out.

Roy Lewallen, W7EL

JLB wrote:
> I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless'
> magazine. Unfortunately, the even numbered pages, where the date would be,
> is all advertisements, so no date! Also, unfortunately, the last page of
> the article is lost, which would include the conclusions and bibliography.
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> inductor that can be used in an RF oscillator. The basic idea is to wind
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> is the 'normal' inductor in the RF oscillator. A DC current is then applied
> to the other coil. The frequency of the oscillator can then be controlled
> with the amount of DC current.
>
> I have tried searching the web for more information, but have not found
> anything. The key word in the article is 'transductor', and I have found
> other things called this but not what what this article describes.
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> Anyone know any more about this, or know a web site? The pages I have do
> have some interesting photographs comparing the output of two oscillators,
> one controlled with a varicap and one controlled with the 'transductor'.
> The one with the transductor has a lot less spurious output.
>
> Jim
> N8EE
>
>
>

1748. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 21:28:32 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E690F0D.16F49819@silverstar.com>
Source record: 37201

If you think that ebay @ 1500 is bad don't bother calling Western Test Systems of Cheyenne, Wyoming at 1-800-538-1493 which wants 5,500 for 8569B 10 MHz to 22 GHz w/100 hz resolution.

1749. Argo V numbers added Elecraft RX Comparison Table

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 22:57:33 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3E6923DD.1060303@elecraft.com>
Source record: 37202
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I've just added the ARRL lab test Rx and current drain numbers for the Ten Tec Argo V to our rig comparison table at:

http://www.elecraft.com/K2_perf.htm

73, Eric WA6HHQ
http://www.elecraft.com

1750. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-07 23:22:19 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E6929AF.998EF13B@cox.net>
Source record: 37203

I can second the "not powdered iron" suggestion. I tried winding a few
turns on an existing VFO and applying up to 10 ma of current. I
remember that I got almost no frequency shift. Since this was for use
in portable gear, I did not want to try several hundred mas of current
just to tune an oscillator!

- Dan, N7VE

Roy Lewallen wrote:
>
> I haven't tried it myself, so can give only a few suggestions. One would
> be to use a toroidal ferrite core -- toroid because the lack of a gap in
> the magnetic path will make saturation easier, and ferrite because it
> saturates much more easily than powdered iron. You'll want to use one of
> the 60 - series, high frequency ferrites or equivalent to get decent Q.
> The current will obviously have to be very clean to avoid FM, just like
> you need to use a very clean voltage for a varicap. And you'll have to
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> a PLL, but probably not in a free-running VFO.
>
> Good luck. Let us know what you find out.
>
> Roy Lewallen, W7EL
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> JLB wrote:
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> > is the 'normal' inductor in the RF oscillator. A DC current is then applied
> > to the other coil. The frequency of the oscillator can then be controlled
> > with the amount of DC current.
> >
> > I have tried searching the web for more information, but have not found
> > anything. The key word in the article is 'transductor', and I have found
> > other things called this but not what what this article describes.
> >

> > Anyone know any more about this, or know a web site? The pages I have do
> > have some interesting photographs comparing the output of two oscillators,
> > one controlled with a varicap and one controlled with the 'transductor'.
> > The one with the transductor has a lot less spurious output.
> >
> > Jim
> > N8EE
> >
> >
> >

1751. What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 00:48:10 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4beh7$1sf7bo$1@ID-150848.news.dfncis.de>
Source record: 37204

Before I start figuring on what to do VFO-wise, I'd better figure out some specs.

Lets say I want to do CW working (Never done CW BTW, just about to learn it). First of all what IF bandwidth should I be thinking of using, 250 to 300Hz?

I want to turn on Rx or Tx, then wait say 10 minites for a warm up. Then I want the rig to display frequency to within, well what, + or - 100Hz?

Okay, then I want the frequency to stay within what parameters? 100Hz per hour?

Thing is I've little understanding of what specs I should be going for in a VFO in todays environment on the bands. I certainly like to think that my Rx or Tx frequency is at least within 100Hz of true. I'm less certain of what specs I should be seeking for regards drift and retuning. Any experienced CWers have a view on these matters?

I presume specs for CW working will satisfy SSB working.

Rich.

1752. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 00:55:51 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4bevt$1u9v1b$1@ID-150848.news.dfncis.de>
Source record: 37205

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4beh7$1sf7bo$1@ID-150848.news.dfncis.de...

>
> Okay, then I want the frequency to stay within what parameters? 100Hz per hour?

Of course, you can always retune the VFO to get back on frequency, but if you had an IF bandwidth of say 250Hz, what is acceptable retune time, ie period between having to retune because the signal is getting too far away from where it should be in the passband.

1753. FS: Tektonix 1A2 dual trace plug-in

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 01:00:48 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <xgWdnSK4qK9Q3fSjXTWcpQ@cnmnetwork.com>
Source record: 37206
Cross-posted to: alt.music-lover.audiophile.hardware,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Nice working unit, wide bandpass, with the usual features.

Fits 5xx series plug-in oscilloscopes, like 535 and 545 etc.

$30 plus shipping from Los Angeles.

Bob

1754. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 01:10:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6igop8thr1a52@corp.supernews.com>
Source record: 37207

Richard wrote:
> Before I start figuring on what to do VFO-wise, I'd better figure out some specs.
>
> Lets say I want to do CW working (Never done CW BTW, just about to learn it). First
> of all what IF bandwidth should I be thinking of using, 250 to 300Hz?

That's awfully narrow. I prefer around 400 Hz for most operating. If you want narrower bandwidth, consider an audio filter with adjustable bandwidth. I've seen cases where new CW operators prefer a narrow bandwidth to reduce distractions. As your speed increases, though, you'll find that your brain becomes a more effective filter, and narrow filters tend to ring and blur higher speed CW, making your preference change to wider bandwidth as you get better.

> I want to turn on Rx or Tx, then wait say 10 minites for a warm up. Then I want the
> rig to display frequency to within, well what, + or - 100Hz?

The frequency display is up to you, depending on what you want to use it for. But since steps of 10 Hz or so are discernable, that might be a more useful resolution.

> Okay, then I want the frequency to stay within what parameters? 100Hz per hour?

That's a good goal. I routinely make a simple Hartley that has about 200 Hz warmup drift at 7 MHz and is adequately stable without any temperature compensation at all. It can be made even better yet by substituting some negative tempco capacitance for some of the NPO. You can find the schematic in any description of the "Optimized QRP Tranceiver" or Hayward & Hayward's "Ugly Weekender", which have appeared in various publications from time to time since their original publication in QST in the early '80s. It's also described in detail, along with a lot of good design information, beginning on p. 4.3 of _Experimental Methods in RF Design_. Incidentally, you should really get this book.

> Thing is I've little understanding of what specs I should be going for in a VFO in
> todays environment on the bands. I certainly like to think that my Rx or Tx
> frequency is at least within 100Hz of true. I'm less certain of what specs I
> should be seeking for regards drift and retuning. Any experienced CWers
> have a view on these matters?

I find the little Hartley, when properly built, to be adequate for casual operating or the demands of Field Day. I once made one for 15 meter direct operation, and found the stability to be inadequate when used outdoors where the sun could heat the rig enclosure. It was, however, uncompensated. You'll find a lot of good information on

temperature compensation in _Experimental Methods. . _.
>
> I presume specs for CW working will satisfy SSB working.

Can't help you there.

Roy Lewallen, W7EL

1755. Mods for Mobira/Nokia/Salora, SRA, Storno, PYE etc

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 02:17:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3e69522d.19791109@news.online.no>
Source record: 37208

will try to include some mods for European PMR equipment on
http://home.online.no/~la8ak/3a.htm and note possible alternative
usage if the set is not recommende for normal use

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1756. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 03:25:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6ioltq8l4vp1e@corp.supernews.com>
Source record: 37209

You might take a look at Hayward's _Radio Frequency Design_, now
published by the ARRL, and _Oscillator Design and Computer Simulation_
by Randall W. Rhea (Noble Publishing). If you're particularly interested
in low noise oscillators, there's a lot of good discussion in
Communications Receivers by Rohde, Whitaker, and Bucher (McGraw-Hill).

Roy Lewallen, W7EL

Bert Herald wrote:
> I think I have the "Solid State Design" book -- is it the one with what
> looks like a bunch of dominos on the cover? Kind of a brown cover and
> paperback? If that's the one, then I didn't feel like it was all that much
> better. Frankly I'm not sure the kind of book I'm looking for exists, from
> what I've seen. I'm looking for something which goes through lengthy
> explanations on various oscillator circuits, including why values are chosen
> as they are, what is critical and what isn't, and some circuit analysis and
> simulations, where they talk about impedances and so forth. For me a book
> which spends more time examining the fundamentals like that would be better
> than having lots of complicated circuits thrown at me. If you don't have a
> solid grasp on the fundamentals, it is difficult to add layers of
> complexity.
>
>
>

1757. BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 04:04:55 UTC
From: ?
Message-ID: <v6ir1sit0lra51@corp.supernews.com>
Source record: 37210

Hi,

I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters by retuning the receiver and transmitter filters. It uses a 9 MHz IF and 5-5.5 MHz VFO. Do I need to move the BFO frequency from the high side to the low side of the IF filter passband to get USB operation on 20 meters?

73,

Jim
N7IHQ

1758. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 04:11:57 UTC
From: averyfineman@aol.com
Message-ID: <20030307231157.10456.00001065@mb-ma.aol.com>
Source record: 37211

In article <3200347.0303071006.72cb2c6@posting.google.com>, k7itm@aol.com (Tom Bruhns) writes:

>averyfineman@aol.com (Avery Fineman) wrote in message
>news:<20030307015152.04841.00000435@mb-cp.aol.com>...
>
>> Heh...I'm not wanting to start a flambe' a la newsgroup, but
>> I've had to do a lot of searching for those easy-to-find,
>> not terribly expensive 1 PPM or better references.
>
>No flame, just some possible ways to help you (and lurkers) out in the
>search for stable reference oscillators... A fellow in the UK used
>to post offers here for some decent reference oscillators at very
>attractive prices; they were some power-of-2 frequency (i.e.,
>something like 2^14*1kHz, if I recall correctly, or maybe it was
>2^20*10Hz). You'd have to accomodate the freq, but the price seemed
>right to me. I suppose it's possible he still has a source of them.
>And you can get a Dallas/Maxim DS32kHz TCXO, +/- 2ppm max over 0-40C,
>as a sample or for $6.95 in singles. Also, you may have noticed the
>offer in my posting. Admittedly, you have to put up with a very
>limited set of available frequencies, but for me that beats trying to
>implement my own TCXO or oven! ;-o -- I also note that you can get
>very tight tempco crystals from places like International, but they
>are a bit pricey.

A problem on "accommodation" is that the ancilliary circuitry
can get rather large. Using a 32,768 KHz stable rock means
15 flip-flops in a chain begets an exact 1.0 Second signal at
the output. That's great for wristwatches which have a little
specialty CMOS IC inside it with more flip-flops to count down
minutes, hours, days, etc. Somewhat clumsy when a PLL or
DDS or whathaveyou needing a frequency higher than 1.0 Hz
as the reference.

>It seems like accomodating some semi-random frequency isn't much of a
>problem, given the ease of division by arbitrary N up through at least
>the HF frequencies. A key would be continued availability, if you
>wanted to make several copies over a span of time, or make a design
>easily available to others. To that end, the DS32kHz seems a good
>choice, provided you can use the 32.768kHz output frequency without
>too much trouble.

The NTSC color subcarrier frequency was specifically selected
to be comparable to 1 MHz and harmonics (in addition to being
455 times half the sweep line frequency). Those are numerous,

in use by the millions in the USA. If anyone wanted to make a reference standard out of a 3.579545454545 MHz rock, they could through an intermediary PLL. Divide that color subcarrier by 315 to achieve about 11.364 KHz as the reference for a phase-frequency detector. Have a VCO at 1.0 MHz, divide that by 88 to get 11.364 KHz as the comparison input to a P-F detector, adjust the control loop filter constants to fit 11.364 KHz, no problem. Division by 315 = 5 x 7 x 9. Dixision by 88 = 8 x 11. That intermediary PLL VCO output will be locked to 1.000000000 MHz to the tolerance of the color subcarrier frequency. The integer multiplication/division ration is built into the NTSC system.

Now the extra fuss to achieve a 1.00000000 MHz frequency may be more useful since it can manipulated for a wider choise of reference frequencies. On the other hand, the reference can begin with a stable 1.0 or 10.0 MHz crystal without all the other added stuff. I'd say the latter is easier to brew up in the home shop. Mileage varies.

Len Anderson
retired (from regular hours) electronic engineer person

1759. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 07:15:33 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E699894.1090904@ay.com.au>
Source record: 37212

Add more turns (probably a lot more), or use the metal strips out of
those tags used to prevent theft in stores. Laminate yourself up a core
out of those, they have a very low saturation point, designed to
generate harmonics in modest magnetic fields.

That in itself might be an issue, if you saturate the core you'll
probably flat-top the waveform and reduce the Q of the entire system
quite a bit. Apart from the purity issue, you might stop the oscillator.

Dan Tayloe wrote:
> I can second the "not powdered iron" suggestion. I tried winding a few
> turns on an existing VFO and applying up to 10 ma of current. I
> remember that I got almost no frequency shift. Since this was for use
> in portable gear, I did not want to try several hundred mas of current
> just to tune an oscillator!
>
> - Dan, N7VE
>
> Roy Lewallen wrote:
>
>>I haven't tried it myself, so can give only a few suggestions. One would
>>be to use a toroidal ferrite core -- toroid because the lack of a gap in
>>the magnetic path will make saturation easier, and ferrite because it
>>saturates much more easily than powdered iron. You'll want to use one of
>>the 60 - series, high frequency ferrites or equivalent to get decent Q.
>>The current will obviously have to be very clean to avoid FM, just like
>>you need to use a very clean voltage for a varicap. And you'll have to
>>have a good way to decouple the control current from the RF. I doubt
>>that the temperature stability would be very good, and you're very
>>likely to have hysteresis due to residual magnetism -- returning the
>>current to zero won't produce the same frequency as you got before
>>applying current. These might be tolerable in a closed loop system like
>>a PLL, but probably not in a free-running VFO.
>>
>>Good luck. Let us know what you find out.
>>
>>Roy Lewallen, W7EL
>>
>>JLB wrote:
>>
>>>I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless'
>>>magazine. Unfortunately, the even numbered pages, where the date would be,
>>>is all advertisements, so no date! Also, unfortunately, the last page of
>>>the article is lost, which would include the conclusions and bibliography.
>>>

>>>This article describes a voltage (well, actually current) controlled
>>>inductor that can be used in an RF oscillator. The basic idea is to wind
>>>two coils on a magnetic core, like a high turns ratio transformer. One coil
>>>is the 'normal' inductor in the RF oscillator. A DC current is then applied
>>>to the other coil. The frequency of the oscillator can then be controlled
>>>with the amount of DC current.
>>>
>>>I have tried searching the web for more information, but have not found
>>>anything. The key word in the article is 'transductor', and I have found
>>>other things called this but not what what this article describes.
>>>
>>>Anyone know any more about this, or know a web site? The pages I have do
>>>have some interesting photographs comparing the output of two oscillators,
>>>one controlled with a varicap and one controlled with the 'transductor'.
>>>The one with the transductor has a lot less spurious output.
>>>
>>>Jim
>>>N8EE
>>>
>>>
>>>
>>

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Crescent (23% of Full)

1760. Re: Shortened antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 07:19:48 UTC
From: Torbj&#65533;rn Morka <tmorka@online.no>
Message-ID: <rQgaa.35333$Rc7.500298@news2.e.nsc.no>
Source record: 37213

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b4aul0$9de$1@sparta.btinternet.com...
> If you are looking for help with design of a short, helically-wound,
> 1/2-wave dipole, resonant at 3.7 MHz, then download program MIDLOAD.
>
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================
>

Excellent site, good work my man !!!

T.

1761. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 07:37:46 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <e5haa.6792$1v.471959@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37214

If you retune the front end to respond to the image, you will have low-side injection instead of high-side injection. Your rig will be respond to USB, without doing anything else.

Pete

<?> wrote in message news:v6ir1sit0lra51@corp.supernews.com...
> Hi,
>
> I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters by
> retuning the receiver and transmitter filters. It uses a 9 MHz IF and
5-5.5
> MHz VFO. Do I need to move the BFO frequency from the high side to the
low
> side of the IF filter passband to get USB operation on 20 meters?
>
> 73,
>
> Jim
> N7IHQ
>
>

1762. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 09:47:17 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4ce41$1tqki5$1@ID-150848.news.dfncis.de>
Source record: 37215

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4beh7$1sf7bo$1@ID-150848.news.dfncis.de...
> Before I start figuring on what to do VFO-wise, I'd better figure out some specs.
>
> Lets say I want to do CW working (Never done CW BTW, just about to learn it).
First
> of all what IF bandwidth should I be thinking of using, 250 to 300Hz?
>
> I want to turn on Rx or Tx, then wait say 10 minites for a warm up. Then I want the
> rig to display frequency to within, well what, + or - 100Hz?
>
> Okay, then I want the frequency to stay within what parameters? 100Hz per hour?

I wonder if I should be talking in terms of ppm. Anyway, here are the specs of 2
modern commercial ham rigs:

Yaesu FT1000MP MK5

Frequency Steps:
0.625/11.25/2.5/5/10 Hz for SSB, CW, RTTY & Packet; 100 Hz for AM and FM

Freq. Stability:

<ï¿½ 0.5 ppm (after 1 min. @ 25 ï¿½C)

ï¿½ 0.25 ppm (after 1 min. @ 25 ï¿½C, w/TCXO-6)

Yaesu FT897

SynthesizerSteps (Mm.):

10 Hz (CW/SSB), 100 Hz (AM/FMIWFM)

Frequency Stability:

ï¿½4 ppm from 1 mm. to 60 mm after power on. @25 C: 1ppm/hour

ï¿½0.5 ppm/i hour @25 C, after warmup (with optional TCXO-9)

Neither mention frequency readout accuracy.

Okay, looking at the 1000MP. I think things settle within 1 minute to + or - 0.5
ppm. I take it that that means for a frequency of 7Mhz drift is 3.5Hz. Or 1.75Hz
with the optional TCXO. Now, if you can read to 10Hz you would not see that drift.
Your frequency looks rock solid, even though it can drift by 3.5Hz. That's
0.0000005%.

(I wonder what the ppm spec relate to. Final output or received frequency I guess.)

I notice that with the right xtals the old xtal controlled FL50B I have will drift no more than 0.001%. At 7Mhz the drift would be 70Hz. (1ppm = 7Hz, so that's stability of 10ppm). Normal xtals drift would be 0.005% or 350Hz @ 7Mhz (50ppm). Well I'm a bit shocked, 350Hz looks bad and that's for xtal control! Wonder if regular modern xtals are better than 1960's ones! I do need to change the frequency sources in my old set! That could be daunting, since there is the VFO, a heterodyne crystal, then the BFO. When I think about it, if wanted stability in my old FR50 line-up, seems like I may need something to measure the frequency of all three of these oscillators circuits. (Is it worth it if I had to do that).

Anyway, all well and good, but it's the modern practical specification that should interest me. I mean what is acceptable drift considering say an IF bandwith of 400 or 500Hz. 4ppm/hr? At 7Mhz that would translate to 28Hz/hr. That looks good. (I'd see that drift with a 10Hz readout). Would anyone here be happy with 4ppm or could one afford to have 6, 8 or even 10ppm in a CW setting? Again, we have to be talking about final output frequency I think.

Given the circuit setup in the old FL50B/FR50B that I want to mod, maybe for simplicity of modification, the stability ought to be left to be a function of an unmeasured and therefore uncompensated for heterodye xtal oscillator. I'm sure there is one in the Rx and Tx. But, if the heterodyne oscillators have 0.005% stability, that could defeat the object of making a very stable VFO. So, we are then talking about putting in a modern high stability xtal for the heterodyne oscillators, or measuring and compensating heterodyne osc drift in the VFO.

Frequency steps not relevant, inasmuch as I'm trying to simply stabilise an LC VFO.

(I'm trying to think, will the BFO osc frequency affect the received frequency. I don't think so). Rich.

1763. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 09:56:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4cekm$1v4hgv$1@ID-150848.news.dfncis.de>
Source record: 37216

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4ce41$1tqki5$1@ID-150848.news.dfncis.de...

> Given the circuit setup in the old FL50B/FR50B that I want to mod, maybe for
> simplicity of modification, the stability ought to be left to be a function of an
> unmeasured and therefore uncompensated for heterodye xtal oscillator. I'm sure
there
> is one in the Rx and Tx. But, if the heterodyne oscillators have 0.005% stability,
> that could defeat the object of making a very stable VFO. So, we are then talking
> about putting in a modern high stability xtal for the heterodyne oscillators, or
> measuring and compensating heterodyne osc drift in the VFO.

Sort of going of the subject of the thread, but, heterodye osc (or carrier osc) got
to be better than 0.005%stability, because I can acheive 0.001% stability if I plug
in a good xtal. I must take a look at the subject of xtal osc stability, and figure
out stability of the xtal osc in the set.

1764. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 10:17:07 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <I8WEGmHjMca+EAiE@ifwtech.co.uk>
Source record: 37218

Roy Lewallen wrote:
>You might take a look at Hayward's _Radio Frequency Design_, now
>published by the ARRL, and _Oscillator Design and Computer Simulation_
>by Randall W. Rhea (Noble Publishing). If you're particularly
>interested in low noise oscillators, there's a lot of good discussion
>in _Communications Receivers_ by Rohde, Whitaker, and Bucher (McGraw-Hill).
>

Rhea's book is available in PDF form on the web (search for his and/or the publisher's name). It's a huge download, and many equations and diagrams have been mangled in the PDF conversion process, so you can't really learn much detail from it. Still, it's enough to help you decide whether you need to order the real thing.

Alternatively, it may be easier to order any of these books through your local public library first.

Another highly recommended book is 'The Art of Electronics' by Horowitz and Hill. This hardly deals with RF at all, but it will greatly consolidate your general background in electronics (if you don't already have that) and then you'll then be in much better shape to move on to the specialist RF area.

The beauty of H&H is that it is a rigorous college-level textbook, yet at the same time it tells you practical things that you need to know, and does it all in an easy-going way with no more math than is absolutely necessary.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1765. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 11:14:48 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e69cf68.1471515@news.freeserve.net>
Source record: 37217

On Fri, 7 Mar 2003 20:04:55 -0800, <?> wrote:

>Hi,
>
>I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters by
>retuning the receiver and transmitter filters. It uses a 9 MHz IF and 5-5.5
>MHz VFO. Do I need to move the BFO frequency from the high side to the low
>side of the IF filter passband to get USB operation on 20 meters?
>
>73,
>
It may be cheaper to retune the VFO to run on the HF (23-23.5 mhz)
side as obtaining a BFO xtal _could_ be expensive. but essentially the
answer is..

Yes you will need to change the BFO if you want to use USB on 20m with
the existing system.

hth Mike W, G8NXD aka M3MSM qthr

1766. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 12:36:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v6jqk6fa33e95b@corp.supernews.com>
Source record: 37219

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6igop8thr1a52@corp.supernews.com...

> you'll find that your brain becomes a more effective filter, and narrow
> filters tend to ring and blur higher speed CW, making your preference
> change to wider bandwidth as you get better.

Although it is true that narrow filters so "blur" the CW (the math says so), the effect really isn't significant at practical speeds (below about 40 wpm). Narrow filters do tend to have a hollow sound which can be annoying, however. Narrow filters used to have a significant ringing effect, which could make high speed, heck, even moderate speed, CW difficult, but I haven't seen that in a while, perhaps computer designed filters made that go away, I'm not sure.

A big advantage to a narrow filter is that, not only does the filter whack out interference, but it also whacks out band noise. From that perspective, the narrow filter is a big win.

Balancing that, however, is that you need to be very careful when tuning across the band with a narrow filter if you aren't going to miss most of the stations. With a little wider filter you have more time for him to press on the key before you've passed over him. I think you indicated that you have an analog VFO, I'm assuming varactor tuned, I wouldn't go more than 60 or 70 kHz wide for a ten turn pot with a filter much under 500 Hz simply from the tuning difficulty.

Someone suggested 400 which seems to me to be not a bad compromise if your filter has pretty steep skirts. If you are making up a filter with, say, 3 or 4 crystals, I'd go a little narrower since you aren't going to get real steep skirts and the wider filter won't have such a big advantage. If you are going to buy a Collins mechanical filter with a breathtaking drop off the edges, perhaps a little wider would be in order.

A common practice among QRPers is to make a crystal filter with varactors at each stage, allowing the bandwidth to be adjusted. A range of 250 to 750 Hz seems to be pretty popular for this arrangement.

..

1767. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 13:30:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <ijlj6voqc2e63jnvre11kj0glcei4dvuci@4ax.com>
Source record: 37220

On Sat, 8 Mar 2003 09:47:17 -0000, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>I wonder if I should be talking in terms of ppm. Anyway, here are the specs of 2
>modern commercial ham rigs:
>
>
>Yaesu FT1000MP MK5
>
>Frequency Steps:
>0.625/11.25/2.5/5/10 Hz for SSB, CW, RTTY & Packet; 100 Hz for AM and FM
>
>Freq. Stability:
>
><ï¿½ 0.5 ppm (after 1 min. @ 25 ï¿½C)
>
>ï¿½ 0.25 ppm (after 1 min. @ 25 ï¿½C, w/TCXO-6)

>Neither mention frequency readout accuracy.

Since we are talking about rigs with frequency synthesis (PLL and/or
DSS), the output frequency is _exactly_ Fout = M/N * Fref, in which M
and N are integers and Fref is the (TCXO) main oscillator. The
frequency display is derived from M and N _assuming_ that Fref is
exactly at the nominal frequency (which it seldom is:-).

Thus the only source of readout error is the rounding/truncating
error, if the frequency synthesis step is different from the display
resolution. If the synthesis steps are 0.625 Hz and the display
resolution is 1 Hz, the last digit can be off by one.

>Okay, looking at the 1000MP. I think things settle within 1 minute to + or - 0.5
>ppm. I take it that that means for a frequency of 7Mhz drift is 3.5Hz. Or 1.75Hz
>with the optional TCXO. Now, if you can read to 10Hz you would not see that drift.
>Your frequency looks rock solid, even though it can drift by 3.5Hz. That's
>0.0000005%.

These rigs use frequency synthesis and the displayed frequency is
derived from the integers M and N, so regardless how much the
reference TCXO drifts, the displayed frequency does not change at all.

The situation would be different, if the frequency generation would be
based on a free running VFO and the display would be driven by an
independent frequency counter with ultra stable time base,then you
would see the drift in the displayed frequency.

>(I wonder what the ppm spec relate to. Final output or received frequency I guess.)

My guess is that the quoted frequency stability refer to the TXCO, not the Rx or Tx frequency. Measuring the TXCO frequency accurately is easy, while measuring the Rx frequency would require an external signal source and an audio frequency counter to monitor the CW beat note frequency.

It should be noted that most general coverage HF rigs use up-conversion with an IF of, say, 60 MHz, thus the local oscillator range is 60-90 MHz for the 0-30 MHz Rx/Tx range, thus with a 1 ppm reference frequency error would translate to 60 Hz when receiving LF/MF signals and 90 Hz when operating in the 28 MHz band.

Paul OH3LWR

1768. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 13:51:25 UTC
From: brokebob@aol.com
Message-ID: <20030308085125.05249.00000075@mb-fy.aol.com>
Source record: 37221

My CW station is all home-brew and I have no idea what the specs are for anything about it. If something doesn't appear acceptable then I work on that problem. Operating style has a lot to do with what is desirable in CW. A station that is operating in a traffic net certainly would like selectivity wider than one trying to work DX in a pile-up. Most of my listening is while I am working on something at the work bench. If it sounds right and the reports are good then the specs are just right.
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1769. Some of these older tube rigs really make modifications "interesting".

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 14:30:33 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4cuoh$1u3769$1@ID-150848.news.dfncis.de>
Source record: 37222

I'l say they do. I mean difficult! Take my FR50B and FL50B. The VFO can feed the RX and TX. For explanations sake, if the VFO is on 8672.4Khz, the TX output on CW is 3500Khz. Modulate and the lower sideband extends (if it is 3Khz wide) down to 3497Khz, centre of the sideband frequencies being 3498.5Khz, carrier being at 3800Khz. Okay, but the really "interesting" bit is that the RX is tuned perfectly for a CW signal on 3498.5Khz!!! A signal here is right in the middle of the RX IF passband (455Khz). Yet, oddly enough RX is tuned perfectly for a SSB signal being on 3800Khz, BFO setting being 456.5Khz.

This makes getting a correct frequency reading difficult, unless I can program in the difference between CW and SSB.

Working for 80m:

TX Rf out freq = VFO - C.O.
8672.4 - 5172.5 = 3500

RX Rf in freq = VFO - 1st IF
8672.4 - 5173.9 = 3498.5

These older rigs, don't you just love 'em. :c)

1770. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 14:59:13 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <oznaa.138$Bc6.38@news.inreach.com>
Source record: 37223

Jim:

The first response to your post is correct. You don't need to change the crystal in the BFO, you only need to change the tuned circuits. If you move the VFO to the other side of the IF, THEN you will also need to change the crystal.

This is the common way the 9 mHz IF has been used for decades and is in large part responsible for the custom of LSB on 80 and 40 and USB on 20 and above.

Roger K6XQ

1771. Re: Some of these older tube rigs really make modifications "interesting".

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 15:00:22 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <9Anaa.1115$t4.95255@newsfep2-gui>
Source record: 37224

Hello,

Good job it's raining outside.

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4cuoh$1u3769$1@ID-150848.news.dfncis.de...
> I'l say they do. I mean difficult! Take my FR50B and FL50B. The VFO can
feed the
> RX and TX. For explanations sake, if the VFO is on 8672.4Khz, the TX
output on CW is
> 3500Khz. Modulate and the lower sideband extends (if it is 3Khz wide)
down to
> 3497Khz, centre of the sideband frequencies being 3498.5Khz, carrier being
at
> 3800Khz. Okay, but the really "interesting" bit is that the RX is tuned
perfectly for
> a CW signal on 3498.5Khz!!! A signal here is right in the middle of the RX
IF
> passband (455Khz). Yet, oddly enough RX is tuned perfectly for a SSB
signal being on
> 3800Khz, BFO setting being 456.5Khz.
>
> This makes getting a correct frequency reading difficult, unless I can
program in the
> difference between CW and SSB.
>
> Working for 80m:
>
> TX Rf out freq = VFO - C.O.
> 8672.4 - 5172.5 = 3500
>
> RX Rf in freq = VFO - 1st IF
> 8672.4 - 5173.9 = 3498.5
>
> These older rigs, don't you just love 'em. :c)
>

1772. Re: Some of these older tube rigs really make modifications "interesting".

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 15:59:21 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4d3u2$1ti4v5$1@ID-150848.news.dfncis.de>
Source record: 37225

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4cuoh$1u3769$1@ID-150848.news.dfncis.de...

> Working for 80m:
>
> TX Rf out freq = VFO - C.O.
> 8672.4 - 5172.5 = 3500
>
> RX Rf in freq = VFO - 1st IF
> 8672.4 - 5173.9 = 3498.5
>
> These older rigs, don't you just love 'em. :c)

I'm thinking out loud again. :c)

Difficulties arise if you change from CW to SSB or use one VFO to control TX and TX.

Normally you might use these rigs a seperates. You (say) put a 8672.4 Khz xtal in the TX. You out CW on 3500 Khz. Before that you have calibrated the RX with xtal cal or with RF out from TX. Your RX VFO frequency is on 8673.9 Khz, slightly different from the TX xtal. Your dial is made to read 3500 Khz dead.

Op thinks, I'll try SSB, leaves xtal in and transmits SSB with carrier on 3.500 Khz. But, Rx needs adjusting because VFO needs to be on 8672.4 Khz for a 3500 Khz SSB signal. You tweak Rx dial so you can copy the station at the other end who has a modern rig that does not have these niggling design artifacts. But your dial only reads out by 1.5Khz, which you cannot discern anyway because the dial is not great. But you know that you are transmitting on 3500 Khz and the guy at the other nd surely is pretty close to yout trnasmit frequency.

As for calibration with the internal cal. Okay for CW, but produces a 1.5Khz error for SSB.

As for one VFO controlling RX and TX, problems. Okay for SSB. As for CW, RX wants 8673.9 Khz, not 8672.4 Khz. Yep you will hear the CW in a 3Khz filiter, but maybe not 400Hz. Modifying theYaesu 50 line for single VFO operation is not going to be a peice of cake. :c(

1773. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 16:39:58 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <y1paa.6430$Oz1.498099@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37226

Thanks Roy and Ian for the posts. I will see if I can dig up those books as they do seem very pertinent to my interests.

73,
Bert

1774. Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 16:47:17 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <p8paa.6449$Oz1.500061@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37227

I'm sure there are many sources for this, but I thought I'd get the lists' opinions. I'm looking for a simple receiver circuit that will tune a wide swath of the broadcast shortwave spectrum. I want it simple so that I can learn how it works, so if images are present or selectivity/sensitivity isn't the best, that's ok (not looking to build a Kenwood!). Preferably constructed from junkbox parts and inexpensive readily-available parts. Any suggestions?

Thx,
Bert WF7I

1775. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 18:40:34 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E6A3922.8B8D39F3@eoni.com>
Source record: 37228

Charles Wenzel's webpage has a number of reprints of past published
articles. This one may be the one you're looking for, or may give you
some ideas.
http://www.wenzel.com/pdffiles/crvco.pdf

Steve AA7U

JLB wrote:
>
> I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless'
> magazine. Unfortunately, the even numbered pages, where the date would be,
> is all advertisements, so no date! Also, unfortunately, the last page of
> the article is lost, which would include the conclusions and bibliography.
>
> This article describes a voltage (well, actually current) controlled
> inductor that can be used in an RF oscillator. The basic idea is to wind
> two coils on a magnetic core, like a high turns ratio transformer. One coil
> is the 'normal' inductor in the RF oscillator. A DC current is then applied
> to the other coil. The frequency of the oscillator can then be controlled
> with the amount of DC current.
>
> I have tried searching the web for more information, but have not found
> anything. The key word in the article is 'transductor', and I have found
> other things called this but not what what this article describes.
>
> Anyone know any more about this, or know a web site? The pages I have do
> have some interesting photographs comparing the output of two oscillators,
> one controlled with a varicap and one controlled with the 'transductor'.
> The one with the transductor has a lot less spurious output.
>
> Jim
> N8EE

1776. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 18:43:59 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E6A39EF.B0E27EB4@eoni.com>
Source record: 37229

Hi Bert,
I believe Ramsey Electronics sells an inexpensive shortwave radio kit
that might be something you'd be interested in.
This site also has lots of interesting circuits, which might be of
interest also.
http://www.techlib.com/

Steve AA7U

Bert Herald wrote:
>
> I'm sure there are many sources for this, but I thought I'd get the lists'
> opinions. I'm looking for a simple receiver circuit that will tune a wide
> swath of the broadcast shortwave spectrum. I want it simple so that I can
> learn how it works, so if images are present or selectivity/sensitivity
> isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> constructed from junkbox parts and inexpensive readily-available parts. Any
> suggestions?
>
> Thx,
> Bert WF7I

1777. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 19:22:01 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E6A42D8.CAD61C72@att.net>
Source record: 37230

Avery Fineman wrote:

> >Anyway, REAL amateurs dig up, cut and grind their own quartz.
>
> Hmphhh...when I was young we whittled our own ICs out of wood.
>
> :-)
>
> Len Anderson
> retired (from regular hours) electronic engineer person

But then......you were never -and still are not- an amateur radio
operator.

1778. Re: Light Saddam's Cigar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 19:23:15 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E6A4322.F50B9ECB@att.net>
Source record: 37231

You know how it always is. A disturbingly large segment of our esteemed populace sits on their tushes thinking only about "me" until the ship hits the sand and suddenly they find themselves on a heavily sloping deck. Then it's "Why didn't they DO something!!!".

amdx wrote:

> Our concern is not Bush's verbal fumbles, our concern is Saddam's use of
> weapons of mass destruction on us.
>
> > > Could somebody tell me where one could find jokes and nice >>pictures of
> all the stupid things he does?

1779. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 19:27:44 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e6a4429$0$138$edfadb0f@dtext02.news.tele.dk>
Source record: 37232

Hello Bert

> I'm sure there are many sources for this, but I thought I'd get the lists'
> opinions. I'm looking for a simple receiver circuit that will tune a wide
> swath of the broadcast shortwave spectrum. I want it simple so that I can
> learn how it works, so if images are present or selectivity/sensitivity
> isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> constructed from junkbox parts and inexpensive readily-available parts.
Any
> suggestions?

I have the same idea, at the moment I am trying to colect the items
that are used in the small reciever shown here

http://www.jogis-roehrenbude.de/Bastelschule/12AT7-Radio/12AT7-Radio.htm

I am planing to build one of these together with my son, he is 12 years now
and it is time for him to learn the basic of radio and also the danger with
high voltage and I think this is a perfect way to do it.

Regards Max

1780. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 19:43:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4dh5p$m2b$1@helle.btinternet.com>
Source record: 37233

Best to start with the most simple 1 or 2 transistor receivers and work your
way up to superhets learning as you go.

It's impossible to work backwards.

==========

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:p8paa.6449$Oz1.500061@bgtnsc05-news.ops.worldnet.att.net...
> I'm sure there are many sources for this, but I thought I'd get the lists'
> opinions. I'm looking for a simple receiver circuit that will tune a wide
> swath of the broadcast shortwave spectrum. I want it simple so that I can
> learn how it works, so if images are present or selectivity/sensitivity
> isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> constructed from junkbox parts and inexpensive readily-available parts.
Any
> suggestions?
>
> Thx,
> Bert WF7I
>
>

1781. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 20:16:30 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E6A4F9F.E26AC0A5@silverstar.com>
Source record: 37234

Check out the Amidon website http://www.amidon-inductive.com/

1782. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 20:39:10 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E6A54EE.93C2B9B1@eoni.com>
Source record: 37236

Here's the Ramsey SW kit link. It tunes "any 2MHz segment, of the
4-20MHz range". $40.

http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=SR2

Steve

Bert Herald wrote:
>
> I'm sure there are many sources for this, but I thought I'd get the lists'
> opinions. I'm looking for a simple receiver circuit that will tune a wide
> swath of the broadcast shortwave spectrum. I want it simple so that I can
> learn how it works, so if images are present or selectivity/sensitivity
> isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> constructed from junkbox parts and inexpensive readily-available parts. Any
> suggestions?
>
> Thx,
> Bert WF7I

1783. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 20:42:27 UTC
From: DrGrok@mungednet.com
Message-ID: <b4dkctbeq2@bob.news.rcn.net>
Source record: 37235

In article <20030307231157.10456.00001065@mb-ma.aol.com>, averyfineman@aol.com (Avery Fineman) wrote:
>In article <3200347.0303071006.72cb2c6@posting.google.com>, k7itm@aol.com (Tom >Bruhns) writes:
>
>>averyfineman@aol.com (Avery Fineman) wrote in message >>news:<20030307015152.04841.00000435@mb-cp.aol.com>...
>>
>>> Heh...I'm not wanting to start a flambe' a la newsgroup, but
>>> I've had to do a lot of searching for those easy-to-find,
>>> not terribly expensive 1 PPM or better references.
>>
>>No flame, just some possible ways to help you (and lurkers) out in the >>search for stable reference oscillators... A fellow in the UK used >>to post offers here for some decent reference oscillators at very >>attractive prices; they were some power-of-2 frequency (i.e., >>something like 2^14*1kHz, if I recall correctly, or maybe it was >>2^20*10Hz). You'd have to accomodate the freq, but the price seemed >>right to me. I suppose it's possible he still has a source of them. >>And you can get a Dallas/Maxim DS32kHz TCXO, +/- 2ppm max over 0-40C, >>as a sample or for $6.95 in singles. Also, you may have noticed the >>offer in my posting. Admittedly, you have to put up with a very >>limited set of available frequencies, but for me that beats trying to >>implement my own TCXO or oven! ;-o -- I also note that you can get >>very tight tempco crystals from places like International, but they >>are a bit pricey.
>
> A problem on "accommodation" is that the ancilliary circuitry
> can get rather large. Using a 32,768 KHz stable rock means
> 15 flip-flops in a chain begets an exact 1.0 Second signal at
> the output. That's great for wristwatches which have a little
> specialty CMOS IC inside it with more flip-flops to count down
> minutes, hours, days, etc. Somewhat clumsy when a PLL or
> DDS or whathaveyou needing a frequency higher than 1.0 Hz
> as the reference.
>
>>It seems like accomodating some semi-random frequency isn't much of a >>problem, given the ease of division by arbitrary N up through at least >>the HF frequencies. A key would be continued availability, if you >>wanted to make several copies over a span of time, or make a design >>easily available to others. To that end, the DS32kHz seems a good >>choice, provided you can use the 32.768kHz output frequency without >>too much trouble.
>

> The NTSC color subcarrier frequency was specifically selected
> to be comparable to 1 MHz and harmonics (in addition to being
> 455 times half the sweep line frequency). Those are numerous,
> in use by the millions in the USA. If anyone wanted to make a
> reference standard out of a 3.579545454545 MHz rock, they
> could through an intermediary PLL. Divide that color subcarrier
> by 315 to achieve about 11.364 KHz as the reference for a phase-
> frequency detector. Have a VCO at 1.0 MHz, divide that by 88 to
> get 11.364 KHz as the comparison input to a P-F detector, adjust
> the control loop filter constants to fit 11.364 KHz, no problem.
> Division by 315 = 5 x 7 x 9. Dixision by 88 = 8 x 11. That
> intermediary PLL VCO output will be locked to 1.000000000 MHz
> to the tolerance of the color subcarrier frequency. The integer
> multiplication/division ration is built into the NTSC system.

For even better accuracy get the color subcarrier out of a TV that's tuned to a network program. IIRC the source for these signals comes from a rubidium or cesium standard. Since all timing is derived from this frequency it allows good synchronization over the network.

Dr. G.

>
> Now the extra fuss to achieve a 1.00000000 MHz frequency may
> be more useful since it can manipulated for a wider choise of
> reference frequencies. On the other hand, the reference can
> begin with a stable 1.0 or 10.0 MHz crystal without all the other
> added stuff. I'd say the latter is easier to brew up in the home
> shop. Mileage varies.
>
> Len Anderson
> retired (from regular hours) electronic engineer person
>

1784. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 21:49:57 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6A6585.3000604@bellsouth.net>
Source record: 37237

Max wrote:
> Hello Bert
>
>
>>I'm sure there are many sources for this, but I thought I'd get the lists'
>>opinions. I'm looking for a simple receiver circuit that will tune a wide
>>swath of the broadcast shortwave spectrum. I want it simple so that I can
>>learn how it works, so if images are present or selectivity/sensitivity
>>isn't the best, that's ok (not looking to build a Kenwood!). Preferably
>>constructed from junkbox parts and inexpensive readily-available parts.
>
> Any
>
>>suggestions?
>
>
> I have the same idea, at the moment I am trying to colect the items
> that are used in the small reciever shown here
>
> http://www.jogis-roehrenbude.de/Bastelschule/12AT7-Radio/12AT7-Radio.htm
>
> I am planing to build one of these together with my son, he is 12 years now
> and it is time for him to learn the basic of radio and also the danger with
> high voltage and I think this is a perfect way to do it.
>
> Regards Max
>
>
>

Wow, I remember that set. It was in an issue of electronics illustrated
many years
ago, I probably have that issue hidden away in a box someplace. Not a
bad way to start
but a few of the parts may be hard to find. I'm sure some of the guys
on this NG may
have some dead octal tubes you could smash up for the tube bases. If
you can't find the
power transformer use two filament transformers back to back. The input
transformer
should be a 1 amp job, the output one (to provide the hv) could be a 1/2
amp unit. If you
can't find the high impedance headphones (Antique Electronic supply has
them) you can

get an output transformer out of an old AA5 and use a pair of 'walkman' phones instead.
Just connect the transformer primary in place of r7 and don't use c17. Connect the
walkman phones to the transformer secondary. Since most walkman phones have an
impedance of about 16 ohms or so and an AA5 output transformer was usually 2k to 3.2 ohms
you will end up with a plate impedance of close to 10k, just about right for the 12AT7.

Have fun!

1785. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 21:57:29 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6A6749.8090309@bellsouth.net>
Source record: 37238

Oh I almost forgot.....
You will need to change the coil data a little to tune the
sw broadcast bands instead of the ham bands. Add or subtract
a little from the total turns to move the frequency higher or lower.
Or change the value of C2-C7 a little (make them bigger, say 100pf
instead of
47pf and 47pf instead of 10pf) to tune a wider range.

Also look at the twinplex receiver in a Lindsay book.
http://www.lindsaybks.com/bks/twin/index.html
And look at my web site for my version of that radio.
http://www.qsl.net/wa2mze/Twinplex.html

The EI receiver is very similar to the twinplex, except ac powered.
Might be safer building a radio powered by two D cells and
10 9 volt batteries in series.

73's
Ken

1786. How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 21:59:50 UTC
From: dkcombs@panix.com
Message-ID: <b4dp4m$a21$1@panix1.panix.com>
Source record: 37239
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

(Maybe *someone* in all these newsgroups knows how
to do this -- the resulting info will hopefully
be useful to readers of each of these many, many
newsgroups.)

Am listening via net streaming-audio to an important
meeting 3000 miles away, and need to tape it, if
possible.

The pc has an earphone/headphones out, which works
fine, super quality sound coming out.

I also have a sony walkman-like casette-player/recorder,
and that has a "mic" (microphone, presumably) input
socket right next to its headphone out.

I want to use that wee machine as my tape-recorder.

(No, don't have the user-manual, which would
give me the specs for it.)

Surely there's a *huge* voltage mismatch,
tiny voltage generated by sound-waves hitting
the mike, vs what it takes to drive the headphones.

To say nothing of the impedances.

QUESTION: is there some, er, "bridge" that
I can buy that will
connect the pc's headphone-out to the
walkman-like recorder's mike-input?

If possible, I vastly prefer to not be forced
to build such a thing -- especially with
no more heathkits available!

(I just called the local radio shack, and their
"expert" said he knew of no such device.)

Thanks so much!

David

1787. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 22:15:48 UTC
From: Mefix <mefix@home.scotland>
Message-ID: <b4dq2jt1@venus.btinternet.com>
Source record: 37240
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

"David Combs" <dkcombs@panix.com> wrote in message
news:b4dp4m$a21$1@panix1.panix.com...
> (Maybe *someone* in all these newsgroups knows how
> to do this -- the resulting info will hopefully
> be useful to readers of each of these many, many
> newsgroups.)
>
> Am listening via net streaming-audio to an important
> meeting 3000 miles away, and need to tape it, if
> possible.
>
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> I want to use that wee machine as my tape-recorder.

Well, I once connected the headphone output from a turntable into the microphone input of a small tape recorder through a 47K resistor - worked perfectly and cost nothing. :^)

1788. Re: looking for a HP 8568B spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 22:23:59 UTC
From: Lasse SM5GLC <no_email@today.sri>
Message-ID: <peqk6vgaisdced4bui87el3sbtm5njqikb@4ax.com>
Source record: 37241

HP8568B 0-1500 MHz is really one great spectrum analyzer.... I would
easy pay 1500 for it in good working cndx. I use it as THE instrument
of choice when I need a spectrum analyzer at work....

The high freq brother is HP8566 0-22 GHz (325GHz) which is just as
good... price was something like 50-70k 20 years ago and it is still a
great instrument.

There was a variant of the low-freq, nor sure of the number might be
8567 which was intended for EMC measurement.

I doubt anyone will dump their 8566B except when it is too costly to
repair, Agilent still supports this instrument!

HP141 is several generations earlier then the 8566, but why not have a
look at HP182 or the 853 series? I know there is a similar looking
analyzer (as to the 8566) which only went up to 40 MHz, this one
should be much cheaper....
/Lasse SM5GLC

On 5 Mar 2003 21:42:19 -0800, paulmcd101@hotmail.com (paul) wrote:

>I'm looking for a HP 8568B spectrum analyzer for less
>than $1500 that Ebay wants for it (and I can't stand the
>way the price doubles in the last 60 seconds of an auction,
>argh!).
>
>I'm doing radio homebrewing, testing and measurement of received
>HF signals to a frequency accuracy of about 10 Hz (no I don't
>need the 1.5 GHz upper end of the 8568, but I need the
>frequency accuracy and low noise floor at narrow BW -
>that's why the HP 141T won't work).
>
>Does anyone have one of these lying around, gathering dust,
>that they'd like to part with to a budding radio engineer?
>This is for personal/ham radio design use only.
>
>I'm in Medford, Massachusetts, if that helps.
>
>Thanks,
>Paul
>
>p.s. Yes, I already have a great dual trace Tek 7603 scope
>and Tek freq counters and RF signal sources. But thanks
>anyways! (Thanks, Dick! QSL?)

1789. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 22:36:52 UTC
From: Newbie <hapu2@NOSPAM.hotmail.com>
Message-ID: <3E6A7084.8F5455EA@NOSPAM.hotmail.com>
Source record: 37242
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

Hmmmmm
More info is needed for concrete answer. Mic input sensitivity depends
on the kind of mic (electromagnetic or electret, etc), sound card output
level is also not standard, but you can imagine your souncard output is
around 0.1 Vrms (which is a kind of standard for AUX-IN for amplifiers)
and the mic signal is mV range. so you need a voltage division by 100
... If I were you, I would take a 1K potentiometer, and woud use the
middle pin and common pin(Ground, shield) as mic input, after a few
trial and error (start by division by 100) you will hit a suitable point
by potentiometer.
Do take good care of shielding to avoid unbearable noise.
Good luck

David Combs wrote:

> (Maybe *someone* in all these newsgroups knows how
> to do this -- the resulting info will hopefully
> be useful to readers of each of these many, many
> newsgroups.)
>
> Am listening via net streaming-audio to an important
> meeting 3000 miles away, and need to tape it, if
> possible.
>
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> I want to use that wee machine as my tape-recorder.
>
> (No, don't have the user-manual, which would
> give me the specs for it.)
>
> ---
>
> Surely there's a *huge* voltage mismatch,
> tiny voltage generated by sound-waves hitting
> the mike, vs what it takes to drive the headphones.
>

> To say nothing of the impedances.
>
> ----
>
> QUESTION: is there some, er, "bridge" that
> I can buy that will
> connect the pc's headphone-out to the
> walkman-like recorder's mike-input?
>
> If possible, I vastly prefer to not be forced
> to build such a thing -- especially with
> no more heathkits available!
>
> (I just called the local radio shack, and their
> "expert" said he knew of no such device.)
>
> Thanks so much!
>
> David

1790. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 22:56:29 UTC
From: "Eric F. Richards" <efricha@dim.com>
Message-ID: <g8sk6v009of8l84grtnlisltk34d3mlsoq@4ax.com>
Source record: 37243
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

Rat-shack sells attenuating cables.

You may, however have to get a stereo-to-mono adapter to
tap into the thing, or just a stereo splitter to get a
mono jack. Plugging the (mono) attenuating cable into the
stereo jack will short one channel. The S-2-M adapter
just ties them together, which is okayish, but the splitter
will be your best choice. Since your meeting is presumably being
streamed in mono, pulling either channel in would be fine.

Tell the drooling droid at RS:

Part number for Stereo-to-Mono adapter: 274-374
Part number for Stereo-to-Mono splitter (preferred): 274-375
Part number for attenuating cable: 42-2152

Eric

dkcombs@panix.com (David Combs) wrote:

> (Maybe *someone* in all these newsgroups knows how
> to do this -- the resulting info will hopefully
> be useful to readers of each of these many, many
> newsgroups.)
>
> Am listening via net streaming-audio to an important
> meeting 3000 miles away, and need to tape it, if
> possible.
>
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> I want to use that wee machine as my tape-recorder.
>
> (No, don't have the user-manual, which would
> give me the specs for it.)
>
> ---
>

> Surely there's a *huge* voltage mismatch,
> tiny voltage generated by sound-waves hitting
> the mike, vs what it takes to drive the headphones.
>
> To say nothing of the impedances.
>
> ----
>
> QUESTION: is there some, er, "bridge" that
> I can buy that will
> connect the pc's headphone-out to the
> walkman-like recorder's mike-input?
>
> If possible, I vastly prefer to not be forced
> to build such a thing -- especially with
> no more heathkits available!
>
> (I just called the local radio shack, and their
> "expert" said he knew of no such device.)
>
> Thanks so much!
>
> David

--
Eric F. Richards
efricha@dim.com
"The weird part is that I can feel productive even when I'm doomed."
- Dilbert

1791. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 23:03:36 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E6A76A8.3D959696@earthlink.net>
Source record: 37245
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

David Combs wrote:
>
> (Maybe *someone* in all these newsgroups knows how
> to do this -- the resulting info will hopefully
> be useful to readers of each of these many, many
> newsgroups.)
>
> Am listening via net streaming-audio to an important
> meeting 3000 miles away, and need to tape it, if
> possible.
>
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> I want to use that wee machine as my tape-recorder.
>
> (No, don't have the user-manual, which would
> give me the specs for it.)
>
> ---
>
> Surely there's a *huge* voltage mismatch,
> tiny voltage generated by sound-waves hitting
> the mike, vs what it takes to drive the headphones.
>
> To say nothing of the impedances.
>
> ----
>
> QUESTION: is there some, er, "bridge" that
> I can buy that will
> connect the pc's headphone-out to the
> walkman-like recorder's mike-input?
>
> If possible, I vastly prefer to not be forced
> to build such a thing -- especially with
> no more heathkits available!

>
> (I just called the local radio shack, and their
> "expert" said he knew of no such device.)
>
> Thanks so much!
>
> David

Radio Shack used to sell a "Dubbing cable" with a built in
attenuator.
--

Michael A. Terrell
Central Florida

1792. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 23:04:24 UTC
From: chawtrey@hotpop.com
Message-ID: <3e6d759a.12579474@news.cis.dfn.de>
Source record: 37244
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

On 8 Mar 2003 16:59:50 -0500, dkcombs@panix.com (David Combs) wrote:

>The pc has an earphone/headphones out, which works
>fine, super quality sound coming out.
>
>I also have a sony walkman-like casette-player/recorder,
>and that has a "mic" (microphone, presumably) input
>socket right next to its headphone out.
>
>I want to use that wee machine as my tape-recorder.

You may be able to buy an attenuating cable. You might even try hooking up the audio-out from the PC directly to the mic input of the tape recorder using a regular (non-attenuating) cable. I've done that in the past and it worked OK - of course that's no guarantee that it would work for _you_.

You could also try using a few resistors to build a simple voltage divider that would lower the output voltage from the PC.

Unit #02582: Endangered Old-Growth Redwood
Toothpick Artisans, LLC [TINEOGRTALLC]
--
Frivolity is a stern taskmaster.

1793. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 23:29:58 UTC
From: mcalhoun@ksu.edu
Message-ID: <b4dudm$1eq@unix1.cc.ksu.edu>
Source record: 37246

>>..... I'm looking for a simple receiver circuit that will tune a wide
>>swath of the broadcast shortwave spectrum....

>I believe Ramsey Electronics sells an inexpensive shortwave radio kit
>that might be something you'd be interested in.
>....[snip]....

If you build the Ramsey SW kit and then want to listen to CW or SSB, I
can email you an (unpublished -- couldn't find anyone who wanted it!)
article I wrote on adding an outboard BFO.

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1794. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-08 23:40:39 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303081540.6346811@posting.google.com>
Source record: 37147

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20030307231157.10456.00001065@mb-ma.aol.com>...
...
> A problem on "accommodation" is that the ancilliary circuitry
> can get rather large. Using a 32,768 KHz stable rock means
> 15 flip-flops in a chain begets an exact 1.0 Second signal at
> the output. That's great for wristwatches which have a little
> specialty CMOS IC inside it with more flip-flops to count down
> minutes, hours, days, etc. Somewhat clumsy when a PLL or
> DDS or whathaveyou needing a frequency higher than 1.0 Hz
> as the reference.

OTOH (or is that "OTOOOH" by this time?? ;-), this thread started looking at VFO stabilization to a crystal reference, presumably with steps of 10Hz or less, and the simplest way I know of doing that (a FLL) requires only a reference around 10Hz or a bit less, and perhaps four bits of counter, latch and subtracter. A 32768Hz source actually makes it pretty easy to get an 8Hz reference: 12-bit binary divider. That's 20 f/f's, some logic, and a tiny state machine. Should be able to fit everything into a small (32-36 f/f) CPLD. Probably need a mid-size (64-72 f/f) CPLD for a somewhat better PLL implementation. A really _good_ pll implementation, with superior phase noise, is going to be more complicated no matter how you cut it. But I think we were starting from a "KISS" viewpoint here.

Maxim/Dallas also sell higher freqeuncy TCXOs, including 10MHz. They're a bit more expensive, but not bad. But I've gotten what should be a lifetime supply of TCXOs and OCXOs just from scrounging; most are useful freqs like 5, 10, 20 and 100MHz. Boards with very decent oscillators are tossed into the trash. I'll bet if you could find a broken GPS, you could find a good oscillator, likely in working condition. I have some GPS boards with nice little 10MHz oscillators on them (but still working as GPSs!). But again, it's that tradeoff of cheap parts versus the ability to have others replicate a circuit easily. Perhaps a board layout with an easy way to patch in a variety of small oscillators, or an external oscillator signal, is a reasonable way to go.

Cheers,
Tom

1795. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 00:01:30 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <o8ycnQyRbvq2DvejXTWcow@ctc.net>
Source record: 37150

"> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..

Try here:

http://www.science-workshop.com/

1796. homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 00:53:17 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047171197.958438@auth2.dns.griffin.net.uk>
Source record: 37148

anyone got any info on where to find details on homebrew analyzer??
preferably using catv or similar tuner..
Have analyzer at work but would like something simple at home..only using it
to set up amps..filters etc..doesnt need to be very accurate...

thanks simon g0zen..

still looking for 10ghz frequency counter info..

1797. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 00:58:33 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6A91B9.4070907@bellsouth.net>
Source record: 37149

zindazenda wrote:
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>

IIRC Radio Electronics magazine published a project just
about like you describe. I don't remember the issue, maybe someone
on this NG has a copy and can scan it.

1798. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 01:22:09 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <5Hwaa.71726$XB3.67512@news1.west.cox.net>
Source record: 37151

Simon -- see URL:
Poor Man's Spectrum Analyzer"
http://www.science-workshop.com/

Lots more HomeBrew Electronic Projects at URL:
http://ac6v.com/homebrew.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1047171197.958438@auth2.dns.griffin.net.uk...
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using
it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>

1799. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 06:02:05 UTC
From: William <wivey@flash.net>
Message-ID: <xNAaa.25672$wA2.755638@twister.austin.rr.com>
Source record: 37152
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

"David Combs" <dkcombs@panix.com> wrote in message
news:b4dp4m$a21$1@panix1.panix.com...
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> Surely there's a *huge* voltage mismatch,
> tiny voltage generated by sound-waves hitting
> the mike, vs what it takes to drive the headphones.

What you need is an impedance matching circuit. Simplest thing
is to go to Radio Shack, Fry's or some other electronics store
(Best Buy might even have it) and look for either an attenuator
or dubbing cable.

If you really wanted to do it yourself (though you probably won't
save anything over buying a low-end ready made cable or plug)
a non-polarized electrolytic capacitor and a potentiometer would
do. (You could use a resistor, but since you don't have the specs,
might as well make it adjustable - a tiny pc-mount pot would do.)
You can buy a cheap cable with the appropriate plug and socket,
then cut it in half and wire your circuit into the middle. Do a web
search and I bet you find sample circuits.

Here's the circuit I've used. Value of the parts isn't super critical. A
,47 uf cap and a 1K pot are probably fine. Connect the shield (outer
conductor of the cable) from the input to the output and to one
side of the pot (the middle connection on the pot is the wiper, you
want one of the side connections). Connect the other side of the
pot to the input cable's center conductor. Connect the capacitor
to the wiper, and connect the other end of the capacitor to the
center conductor of the output cable. Done. Center the potentiometer
and hook it up. Adjust the potentiometer until you get a decent
recording level. It's crude, but it works (usually). You might have to
go to a 10K pot (doubt it), or down to a 500 ohm pot, but IIRC,
1K works for most headphone outputs. Mostly what you have is a
voltage divider that drops the voltage to something the mic input
can handle.-Wm

1800. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 06:39:25 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4enit$b3l$1@freenet9.carleton.ca>
Source record: 37153

"zindazenda" (zen@lineisp.co.uk) writes:
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>
There have been plenty of those described, I think the original one
using a cable tuner was in Ham Radio, maybe September 1986. There
was a followup or two in that magazine, and Communications Quarterly
had a few, including, I think, by Peter Bertini who posts here.
They were all variations on the theme of a cable tuner or converter,
an IF strip, and something to sweep the tuner.

Radio Electronics had a number of similar projects in the later
years. Some really simple, some really complicated.

Specific dates (which I don't happen to have handy) won't
be much use if you don't have access to the magazines, but if
you can find the magazines in someone else's library, or at a public
library, it shouldn't be much work to look through the annual
index.

All of them had relatively wide IF bandwidth, and most were
not even close to being precision.

Up until about 25 years ago, the sort of thing we'd see in
the ham magazines was more a bandscanner, ie wide enough to
look at one ham band at a time. The basic principle is the same,
though just not wide coverage.

The best article I ever saw about spectrum analyzers was Wayne
Riders article in Ham Radio back in 1977, either the October or
November issue. It covered something like 0 to 100MHz, but for
the time it was the most advanced we'd seen in the hobby magazines.
I'm not sure one should build it today, but since the circuitry
was discrete, it gives a better idea of what's involved. He
also goes into some of the design considerations, which is still
useful now.

Wes Hayward sort of went over that territory in QST a couple of years
back. Unlike most projects, he dropped the tv tuner (and the wide

range) opting for more traditional components, and about a 0 to 100MHz sweep range. It was the August and September 1998 issues. Well worth reading, for background if nothing else. He has a page up about it at http://users.easystreet.com/w7zoi/SA.html and he mentions that the articles are available in PDF format at the ARRL site.

Michael VE2BVW

1801. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 07:00:57 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4eor9cos1@freenet9.carleton.ca>
Source record: 37154

"JLB" (IHateSpam@nospam.net) writes:
> I have a magazine article that I tore out of 'Applied Mircrowave $ Wireless'
> magazine. Unfortunately, the even numbered pages, where the date would be,
> is all advertisements, so no date! Also, unfortunately, the last page of
> the article is lost, which would include the conclusions and bibliography.
>
> This article describes a voltage (well, actually current) controlled
> inductor that can be used in an RF oscillator. The basic idea is to wind
> two coils on a magnetic core, like a high turns ratio transformer. One coil
> is the 'normal' inductor in the RF oscillator. A DC current is then applied
> to the other coil. The frequency of the oscillator can then be controlled
> with the amount of DC current.
>
> I have tried searching the web for more information, but have not found
> anything. The key word in the article is 'transductor', and I have found
> other things called this but not what what this article describes.
>
> Anyone know any more about this, or know a web site? The pages I have do
> have some interesting photographs comparing the output of two oscillators,
> one controlled with a varicap and one controlled with the 'transductor'.
> The one with the transductor has a lot less spurious output.
>
> Jim
> N8EE
>
>
>
As someone said, this is an old technique, though you don't see
it that much.

My 1978 edition of "Amateur Radio Techniques" mentions the scheme
on page 148. He mentions a February 1965 issue of Wireless World,
and mentions sightings of the scheme as far back as 1949.

I have no idea where I might have the article, but there was something
in QST sometime between 1977 and 81.

Michael VE2BVW

1802. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 07:28:36 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4eqf4$f1k$1@freenet9.carleton.ca>
Source record: 37155

"Bert Herald" (bert.herald@worldnet.att.net) writes:
> I'm sure there are many sources for this, but I thought I'd get the lists'
> opinions. I'm looking for a simple receiver circuit that will tune a wide
> swath of the broadcast shortwave spectrum. I want it simple so that I can
> learn how it works, so if images are present or selectivity/sensitivity
> isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> constructed from junkbox parts and inexpensive readily-available parts. Any
> suggestions?
>
> Thx,
> Bert WF7I
>
>
I think you should look in the books you have, or buy some books
aimed at beginners, and just build something. If you're just
trying to learn, anything will be fine. We still haven't solved
your problem with the DC receiver in that new book, and since it
sounds like a relatively simple receiver (unless you lucked onto
one of the complicate DC receivers), if you can't get it to work,
trying something else may not solve the problem.

Someone pointed to a receiver from almost forty years ago, but
realistically, there is nothing particularly great about it. Likely
it is simply available on the web. There must be tens or hundreds
of similarly simple receivers written about over the years, and
they all would tend to be of the same level of performance.

Someone suggested a one or two transistor receiver. That has
it's merits, since it won't cost you much in parts or effort.
I took it as a hint at a regenerative receiver, which has
the advantage of also showing you something about an oscillator,
since Armstrong basically discovered both at the same time.
In recent years, Charles Kitchin has written quite a bit about
regen receivers (and about superregen receivers too, but they
wouldn't be the best choice for shortwave).

Kitchin, Charles. "A Simple Regen Radio For Beginners", QST
magazine, Sept 2000, pp 61-64.

Kitchin, Charles. "High Performance Regenerative Receiver Design",
QEX magazine, Nov/Dec 1998, pp 24-36.

Kitchin, Charles. "An Ultra Simple W1AW Receiver", QST magazine.
May 1997, pp 34-35.

Kitchin, Charles. "Regenerative Receivers: Past And Present",
Communications Quarterly. Fall 1995, pp 7-26.

A similar article to that last one appeared in Electronics Now
for March 1994, "THe Lost Art of Regeneration".

One of his regen designs appeared in one or more ARRL Handbooks
a few years back (again, don't confuse it with one of his superregen
designs, that has appeared a couple of times in the Handbook).

He's had a few other articles on regen receivers in QST, most
recently the September 2000 issue, on page 61.

You might look around the ARRL site, http://www.arrl.org to
see if they've put one of his regen articles up there.

If you don't have any of the paper references (or know noone
who does), do a websearch with <"charles kitchin" regen>
as the searchwords, and you'll find material, either his own
or variations on his work.

Just about any ARRL book is going to have some sort of simple
receiver. What it will be depends on the era; 35 years ago
it would have been a regen, thirty years ago a direct conversion
receiver, then more recently a superhet.

Once you have a regen working, you could add a converter ahead
of it, and get a basic superheterodyne receiver.

Michael VE2BVW

1803. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 07:43:39 UTC
From: alskdjfhg72000@yahoo.com
Message-ID: <3c7e4e8c.0303082343.1b1b8a51@posting.google.com>
Source record: 37156

Hello everyone,

Here in the U.S., I just take my image file down to Kinko's Copy, and they run off a transparency image for me on their black and white laser printer. It's always worked well. It costs me something like a buck a sheet.

I used to work with positive-acting liquid photoresist. GC Electronics makes it, and you can often find it in a spray can at Atex Electronics in San Antonio, TX. Atex is also online. But I've found dry-film photo-resist to be much easier and consistent to use. I get negative-acting film from Think and Tinker, in Colorado; they sell it in rolls of 50, 100, or 500 ft., from what I remember, and the cost runs about a buck a foot (very reasonable). They say that you have to use their expensive laminating equipment (otherwise your house will burn down, your kids will grow up to be wierd, and your dog will run away), but that's not the case at all. Using a 5% alcohol solution (to pre-soften the adhesive on the film), I apply the film to the board by hand, working the excess moisture and wrinkles out of the film with my fingers. After this has been achieved, hard pressure applied with a soft rubber roller (from a junked typewriter) works out any excess moisture which may still be present (important in order to prevent bubbles under the film). The board should be baked for 10 minutes in an oven at 200 deg F to firmly adhere the film to the board, and then exposed with your artwork after it cools. I use a 500W quart halogen worklamp from Home Depot. The lamp costs $9.91 here, and exposes the board in 25 seconds at a 12" bulb distance. Sodium Carbonate (available at pool supply or hardware stores) is used as the developer, and is quite cheap and safe to use. Now that I do it this way, I don't know why I ever used spray resist, but to each his own. I can supply more details if anyone wants to know.

Sam B.

1804. URL to Digital Scope FAQ

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 07:47:36 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-97C9FA.02473609032003@netnews.attbi.com>
Source record: 37157

http://www.qsl.net/wd1v/

1805. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 07:50:39 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4erofgpk1@freenet9.carleton.ca>
Source record: 37158

"Bert Herald" (bert.herald@worldnet.att.net) writes:
> I think I have the "Solid State Design" book -- is it the one with what
> looks like a bunch of dominos on the cover? Kind of a brown cover and
> paperback? If that's the one, then I didn't feel like it was all that much
> better. Frankly I'm not sure the kind of book I'm looking for exists, from
> what I've seen. I'm looking for something which goes through lengthy
> explanations on various oscillator circuits, including why values are chosen
> as they are, what is critical and what isn't, and some circuit analysis and
> simulations, where they talk about impedances and so forth. For me a book
> which spends more time examining the fundamentals like that would be better
> than having lots of complicated circuits thrown at me. If you don't have a
> solid grasp on the fundamentals, it is difficult to add layers of
> complexity.
>
One thing that happens is that when something becomes commonplace,
the explanations tend to go away. A forty to fifty year old ARRL
single sideband book covers the basics of that mode better than many
of the handbooks in more recent decades. Back then, they were explaining
it to everyone, and later material is derived from that. (Really recent
ARRL Handbooks seem to do a more comprehensive job of dealing with
SSB, but I still say the early articles are the best.)

Some of the better material of the type you seem to be looking for
have appeared in magazines, rather than hobby level books. Back in
1974, or 75, QST ran a series "Learning to Work with Semiconductors"
that went into explaning what the different components were for,
including basic calculations. For a while, it was reprinted as
a booklet, but it never made it into a real ARRL book (though
tiny snippets seem to be in "Solid State Design...". It was
a time when calculators were just becoming available cheap,
and that gave permission to show the calculations for determining
component values.

I can think of some other articles that covered more specific
things, and tended to give a better part by part description
than many books and construction articles.

I don't know if they are still in print, and while I would
describe them as being aimed at a lower technical level,
they don't give that blow by blow description that you want.
"W1FB's Design Notebook" (1990) and "W1FB's QRP Notebook" (1991)
both by Doug DeMaw and published by the ARRL. The good part
was they were both relatively cheap; each were under twenty dollars
here in Canada. But I suspect there is a lot of overlap, in
area if not material, with that new ARRL book you bought.

Often, the choice is a hobby book that is mostly construction
articles, or text books that are more theory based. There is
very little middle ground, that covers practical component selection.
I think I've picked it up through osmosis, looking at construction
articles over the years. If it's this frequency range, use
this value of bypass capacitor, if it's that range, use that value.

Michael VE2BVW

1806. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 09:03:29 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e6b0243.1405633@news.freeserve.net>
Source record: 37159

On Sat, 08 Mar 2003 20:42:27 GMT, DrGrok@mungednet.com (Dr. Grok)
wrote:

>In article <20030307231157.10456.00001065@mb-ma.aol.com>, averyfineman@aol.com (Avery
Fineman) wrote:
>>In article <3200347.0303071006.72cb2c6@posting.google.com>, k7itm@aol.com (Tom
>>Bruhns) writes:
>>
>>>averyfineman@aol.com (Avery Fineman) wrote in message
>>>news:<20030307015152.04841.00000435@mb-cp.aol.com>...
>>>
>>>> Heh...I'm not wanting to start a flambe' a la newsgroup, but
>>>> I've had to do a lot of searching for those easy-to-find,
>>>> not terribly expensive 1 PPM or better references.
>>>
>>>No flame, just some possible ways to help you (and lurkers) out in the
>>>search for stable reference oscillators... A fellow in the UK used
>>>to post offers here for some decent reference oscillators at very
>>>attractive prices; they were some power-of-2 frequency (i.e.,
>>>something like 2^14*1kHz, if I recall correctly, or maybe it was
>>>2^20*10Hz). You'd have to accomodate the freq, but the price seemed
>>>right to me. I suppose it's possible he still has a source of them.
>>>And you can get a Dallas/Maxim DS32kHz TCXO, +/- 2ppm max over 0-40C,
>>>as a sample or for $6.95 in singles. Also, you may have noticed the
>>>offer in my posting. Admittedly, you have to put up with a very
>>>limited set of available frequencies, but for me that beats trying to
>>>implement my own TCXO or oven! ;-o -- I also note that you can get
>>>very tight tempco crystals from places like International, but they
>>>are a bit pricey.
>>
>> A problem on "accommodation" is that the ancilliary circuitry
>> can get rather large. Using a 32,768 KHz stable rock means
>> 15 flip-flops in a chain begets an exact 1.0 Second signal at
>> the output. That's great for wristwatches which have a little
>> specialty CMOS IC inside it with more flip-flops to count down
>> minutes, hours, days, etc. Somewhat clumsy when a PLL or
>> DDS or whathaveyou needing a frequency higher than 1.0 Hz
>> as the reference.
>>
>>>It seems like accomodating some semi-random frequency isn't much of a
>>>problem, given the ease of division by arbitrary N up through at least
>>>the HF frequencies. A key would be continued availability, if you
>>>wanted to make several copies over a span of time, or make a design
>>>easily available to others. To that end, the DS32kHz seems a good

>>>choice, provided you can use the 32.768kHz output frequency without
>>>too much trouble.
>>
>> The NTSC color subcarrier frequency was specifically selected
>> to be comparable to 1 MHz and harmonics (in addition to being
>> 455 times half the sweep line frequency). Those are numerous,
>> in use by the millions in the USA. If anyone wanted to make a
>> reference standard out of a 3.579545454545 MHz rock, they
>> could through an intermediary PLL. Divide that color subcarrier
>> by 315 to achieve about 11.364 KHz as the reference for a phase-
>> frequency detector. Have a VCO at 1.0 MHz, divide that by 88 to
>> get 11.364 KHz as the comparison input to a P-F detector, adjust
>> the control loop filter constants to fit 11.364 KHz, no problem.
>> Division by 315 = 5 x 7 x 9. Dixision by 88 = 8 x 11. That
>> intermediary PLL VCO output will be locked to 1.000000000 MHz
>> to the tolerance of the color subcarrier frequency. The integer
>> multiplication/division ration is built into the NTSC system.
>
>For even better accuracy get the color subcarrier out of a TV that's tuned to
>a network program. IIRC the source for these signals comes from a rubidium or
>cesium standard. Since all timing is derived from this frequency it allows
>good synchronization over the network.
>
>Dr. G.
>
>>
>> Now the extra fuss to achieve a 1.00000000 MHz frequency may
>> be more useful since it can manipulated for a wider choise of
>> reference frequencies. On the other hand, the reference can
>> begin with a stable 1.0 or 10.0 MHz crystal without all the other
>> added stuff. I'd say the latter is easier to brew up in the home
>> shop. Mileage varies.
>>
a search of Google for "the poor mans caesium clock" will produce a
phase locked frequency standard at 10, 5, 1, etc Mhz locked to a TV
sync (which is itsself usually locked to a proper caesium clock at
the time of transmission) claimed accuracy is 1 part 10^8

1807. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 09:07:15 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e6b03b2.1772671@news.freeserve.net>
Source record: 37160

On Sat, 08 Mar 2003 11:14:48 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>On Fri, 7 Mar 2003 20:04:55 -0800, <?> wrote:
>
>>Hi,
>>
>>I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters by
>>retuning the receiver and transmitter filters. It uses a 9 MHz IF and 5-5.5
>>MHz VFO. Do I need to move the BFO frequency from the high side to the low
>>side of the IF filter passband to get USB operation on 20 meters?
>>
>>73,
>>
>It may be cheaper to retune the VFO to run on the HF (23-23.5 mhz)
>side as obtaining a BFO xtal _could_ be expensive. but essentially the
>answer is..
>
>Yes you will need to change the BFO if you want to use USB on 20m with
>the existing system.
>
sorry, wrong info. just re-tuning the front-end to 14Mhz will invert
the incoming sideband so there is no need to change the bfo.
My excuse was that it was a long day.. ;-(

1808. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 09:35:38 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e6b0a93.3533544@news.freeserve.net>
Source record: 37161

On Sun, 09 Mar 2003 09:03:29 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

I tried a search and could'nt find it as easily as I thought so..
try
http://www.geocities.com/icdx_australia/poor_mans_caesiumclock.htm
hth Mike W
--

>a search of Google for "the poor mans caesium clock" will produce a
>phase locked frequency standard at 10, 5, 1, etc Mhz locked to a TV
>sync (which is itsself usually locked to a proper caesium clock at
>the time of transmission) claimed accuracy is 1 part 10^8

1809. Items FA - Please take a look.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 10:13:36 UTC
From: ? <Martin@NO_SPAM.g1gyc.demon.co.uk>
Message-ID: <b4f4bukpp1$8300dec7@news.demon.co.uk>
Source record: 37162
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

KiloVac Relay #1
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011078525

KiloVac Relay #2
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011079054

Wire Aerial
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011084363

Speaker
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011114227

Other Stuff
http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

Thanks

1810. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 13:33:29 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <JoHaa.173328$4F3.10909820@news2.east.cox.net>
Source record: 37163

That's the magic behind a 9-MHz filter with a 5-MHz vfo.
You might consider adding a simple bandswitch to change
the front-end preselection to permit dual band operation.
Should be very doable!!

Peter

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3e6b03b2.1772671@news.freeserve.net...
> On Sat, 08 Mar 2003 11:14:48 GMT, mike@corn2.freeserve.co.uk (Mike W)
> wrote:
>
> >On Fri, 7 Mar 2003 20:04:55 -0800, <?> wrote:
> >
> >>Hi,
> >>
> >>I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters
by
> >>retuning the receiver and transmitter filters. It uses a 9 MHz IF and
5-5.5
> >>MHz VFO. Do I need to move the BFO frequency from the high side to the
low
> >>side of the IF filter passband to get USB operation on 20 meters?
> >>
> >>73,
> >>
> >It may be cheaper to retune the VFO to run on the HF (23-23.5 mhz)
> >side as obtaining a BFO xtal _could_ be expensive. but essentially the
> >answer is..
> >
> >Yes you will need to change the BFO if you want to use USB on 20m with
> >the existing system.
> >
> sorry, wrong info. just re-tuning the front-end to 14Mhz will invert
> the incoming sideband so there is no need to change the bfo.
> My excuse was that it was a long day.. ;-(
>

1811. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 13:36:48 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <QrHaa.173338$4F3.10912426@news2.east.cox.net>
Source record: 37164

Weren' the huff'n'puffs simple one digit counters that
provided a DC correction to a varicap in the osciallator?
IIRC, they worked best on oscillators that good short term
stability to begin with. Ham Radio ran a bunch of construction
articles on the technique, and HR is now on CD.

Pete

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20030306194312.06818.00000148@mb-cl.aol.com...
> In article <3200347.0303051154.2e2f2a38@posting.google.com>, k7itm@aol.com
(Tom
> Bruhns) writes:
>
> >"Richard" <nearlynews_email@ntlworld.com> wrote in message
> >news:<b451jt$1rejg5$1@ID-150848.news.dfncis.de>...
> >...
> >>
> >> Is PLL different from "huff-and-puff" or are they the same technique?
> >>
> >> (Again being somewhat lazy just at this moment).
> >
> >So, if you are allowed to be somewhat lazy, can I also be? :-) I'm
> >not sure what you mean by "huff-and-puff", but for sure, a
> >frequency-locked-loop (what I suspect you mean by h-a-p) is not the
> >same as a phase locked loop.
>
> Well, it is and isn't. :-) The "huff and puffs" (Brit term, I
believe)
> is a _stabilizer_ for a normally-manual-tuning variable oscillator.
> The basic "huff and puff" holds frequency within a relatively
> narrow frequency range but specific frequency indication is not
> part of the basic concept (although it could be added easily).
>
> Hans Summers nice website has a number of articles on the
> "huff and puffs" available for downloading...including his own
> application. See his previous message in here.
>
> Stabilizers are in a sort of "interim" category, one that bridges
> only-manually-variable continuously-tuned oscillators to keeping
> that quality but allowing rather good stabilization at small
> increments of tuning. Since "huff and puffs" don't involve the
> artifacts and aliases of DDS (they are essentially as noise-
> free, artifact-free as simple LC oscillators), they are easier to
> apply in homebrew projects. They don't need wide-range or

> high-resolution spectrum analysis to check them out.
>
> >And not all PLLs are created equal, for
> >sure. If you run the phase comparator of the PLL at a very low
> >frequency so you get very close spacing of available frequencies, then
> >the PLL won't be able to take out phase noise at even moderate offsets
> >from the carrier.
>
> As an aside, I will challenge that "phase noise" charge. :-)
>
> If one is involved in CDMA, QPSK, M-ary Whatever Alphabets,
> phase noise will affect signal quality and BER and stomach
> acid quantities. Today's industrial-strength datasheets
> emphasize phase noise specifications because that is what
> the BIG-volume IC purchasers are concerned about. Given
> that the USA has roughly 100 million cellular telephones in
> use now, that scope and size and market profit potential is
> going to drive what is important in certain datasheets.
>
> Few radio amateurs are into cellular telephony applications,
> BER values, etc., etc. Frequency source phase noise will
> affect certain FM applications in amateur work, now done
> at VHF or above. It might, but not absolutely, be of some
> technical importance at very narrow bandwidth moonbouce
> applications using CW on 6 meters.
>
> A single loop PLL will work just fine at small increments, say
> 10 Hz. Trouble of a different sort arises on trying to rapidly
> tune quickly. The control loop time constants must be down
> in the 0.3 second ranges for 10 Hz control increments and
> the divider chain has to be longer by the inverse of the
> frequency increment. One can build a 1 Hz increment PLL
> and not worry overly much on phase noise. That is fine for a
> very fixed frequency control application.
>
> Multiple-loop PLLs get around the problem by having each
> multiple controlled at much higher increments, say 1 KHz as
> is common in the Icom family of 1980s-to-mid-1990s. Those
> loops "nest" by division-by-ten and mixing with next-higher
> loops. Manual (or computer-controlled) tuning is much
> faster, no noticeable lag in knob-twiddling fast or slow, yet
> the controlled increments are very small. Those are complex
> and must be chosen carefully to avoid intermods from certain
> harmonic products, noise build-up from many loops, etc.
>
> The Direct Digital Synthesis group of controlled sources takes
> in most of the "fractional-N" types and the "NCOs" or
> Numerically Controlled Oscillators (a technical misnomer but a
> catchy trade term). Very little hardware there compared to
> mulitple-loop PLLs and one can, definitely, control quickly to

> very small increments of frequency over a relatively wide
> tuned frequency span. While it is relatively simple in number
> of parts, certain DDS design constants must be very strict to
> avoid aliasing and weird artifacts not readily found in PLLs
> and certainly not in simple L-C frequency sources. DDSs are
> not intuitive in operation, absolutely need some kind of
> microprocessor assistance (usually on board DDS ICs). Once
> a DDS subsystem has been worked out in the lab, it is a nice
> profit-maker for a fast-control, small-increment frequency
> source manufacturer.
>
> >So...to keep things simple but good performance, make a VFO oscillator
> >with inherently good phase noise, give it voltage control that can
> >take out whatever long-term drift you anticipate (that is, a very
> >limited voltage control range), and control it with a very simple PLL
> >running from a decent crystal source. Although a PLL takes a bit more
> >logic (more divider stages) than an FLL, it shouldn't be hard to fit
> >one into a single medium-size CPLD, or perhaps a small microcontroller
> >with a tiny bit of external logic.
>
> An ordinary L-C continuously-variable VFO shouldn't be counted
> out. In the old Heathkit "SB" series of kits, I measured (a couple
> decades ago) the frequency stability at 29 MHz of less than 125
> PPM overall over a cold-soak at 58 F to an hours-later hot
> ambient of 92 F. The VFO, common in that line at 5.5 to 5.0
> MHz, drifted less than 250 PPM by itself, locked to 5.35 MHz.*
> The second harmonic of 5.35 MHz falls at 10.7 MHz, the
> standard IF for old FM broadcast receivers...which can be used
> to to measure ALL of the incidental FM with some care and
> calibration. Nothing was heard/seen that seemed worthwhile to
> note on any incidental FM at that time. No PLL, no DDS, just a
> crystal oscillator and the L-C tuning VFO, all in a kit and not
> designed in Iowa. That VFO was a sub-contracted assembly
> quite frequency-linear in tuning.
>
> It is quite possible to achieve stability in frequency and a very
> minimum of "noise" with simple L-C oscillator frequency
> sources, but the designer has to WORK to achieve that.
>
> Len Anderson
> retired (from regular hours) electronic engineer person
>
>
> * 125 PPM = 3.6 KHz at 29 MHz; 250 PPM = 1.3 KHz at 5.35 MHz.
> Two separate measurements, closed circuit. First measured
> transceiver output frequency stability at 29 MHz. Second
> measured just the VFO output through a pickup loop and
> amplified in a 20 db lab amplifier, VFO not disconnected.

1812. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 13:49:44 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <RRadnbHCncWn2vajXTWcoA@comcast.com>
Source record: 37165

Take a look at analog devices www.analog.com application note AN-557 "An Experimenters Project for Incorporating the ADS 9850 Complete DDS Device ..." some very useful hints.

"zindazenda" <zen@lineisp.co.uk> wrote in message news:1047171197.958438@auth2.dns.griffin.net.uk...
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>

1813. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 18:08:35 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <DqLaa.45154$ki.1709787@twister.southeast.rr.com>
Source record: 37166
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

try an Amidon T-68-2,

"Repeating Decimal" <SalmonFly@attbi.com> wrote in message
news:BA898998.45154%SalmonFly@attbi.com...
> in article iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com, Bruce
Raymond
> at raymondb@dma.org wrote on 3/3/03 6:35 PM:
>
> > I'll show my ignorance here - is there a convenient way to calculate the
> > temperature rise in the core that Jason originally referred to? I'd end
up
> > pulling out an old textbook and calculating Grashof and Nusselt numbers
> > for laminar flow from a vertical plate, and then finding the thermal
> > equilibrium
> > point. I imagine that there's an easier method for standard components.
>
> When the core breaks, you have reached the curie temperature.
>
> Bill
>

1814. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 19:12:47 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6B922F.6000106@bellsouth.net>
Source record: 37167

Uncle Peter wrote:
> That's the magic behind a 9-MHz filter with a 5-MHz vfo.
> You might consider adding a simple bandswitch to change
> the front-end preselection to permit dual band operation.
> Should be very doable!!
>
This is probably the reason that LSB is the standard on 80 and 40 while
USB is standard
on 20 and above. Many early SSB rigs used the band image technique to
cover 80 and 40
and most just used a single bfo crystal. I guess a band image rig could
also be built using a
5 mhz crystal filter with a 9mhz vfo. I'm suprised this didn't happen,
5mhz war surplus
ft243 crystals were probably more common than the 9mhz ones, but a 9mhz
vfo wouldn't
have been as stable.

Peter
>
> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3e6b03b2.1772671@news.freeserve.net...
>
>>On Sat, 08 Mar 2003 11:14:48 GMT, mike@corn2.freeserve.co.uk (Mike W)
>>wrote:
>>
>>
>>>On Fri, 7 Mar 2003 20:04:55 -0800, <?> wrote:
>>>
>>>
>>>>Hi,
>>>>
>>>>I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters
>>>
> by
>
>>>>retuning the receiver and transmitter filters. It uses a 9 MHz IF and
>>>
> 5-5.5
>
>>>>MHz VFO. Do I need to move the BFO frequency from the high side to the
>>>
> low
>

>>>>side of the IF filter passband to get USB operation on 20 meters?
>>>>
>>>>73,
>>>>
>>>
>>>It may be cheaper to retune the VFO to run on the HF (23-23.5 mhz)
>>>side as obtaining a BFO xtal _could_ be expensive. but essentially the
>>>answer is..
>>>
>>>Yes you will need to change the BFO if you want to use USB on 20m with
>>>the existing system.
>>>
>>
>>sorry, wrong info. just re-tuning the front-end to 14Mhz will invert
>>the incoming sideband so there is no need to change the bfo.
>>My excuse was that it was a long day.. ;-(
>>
>
>
>

1815. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 19:20:25 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <ZtMaa.10347$Oz1.642456@bgtnsc05-news.ops.worldnet.att.net>
Source record: 37168

Thanks for the wealth of suggestions! This is a great newsgroup.

I'm still working on my first circuit, which I now realize was probably more complicated than a true "beginner" circuit. But I did learn that winding coils on pill bottles for Hartley oscillators doesn't work all that well (it'll oscillate, but if you get your hand within 2 feet of the coil, or blow on it, it will jump like a jackrabbit). I procured some ferrite rods from an elmer friend. I need some torroid cores still. Problem I have is I end up with way more inductance than I want with only 1 or 2 turns!

It's a lot of fun. I enjoy the learning aspects more than getting a functioning radio (I've already got many of these), although it would be nice to eventually end up with one!

73,
Bert

1816. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 19:22:32 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6B9478.9060600@bellsouth.net>
Source record: 37169

Bert Herald wrote:
> Thanks for the wealth of suggestions! This is a great newsgroup.
>
> I'm still working on my first circuit, which I now realize was probably more
> complicated than a true "beginner" circuit. But I did learn that winding
> coils on pill bottles for Hartley oscillators doesn't work all that well
> (it'll oscillate, but if you get your hand within 2 feet of the coil, or
> blow on it, it will jump like a jackrabbit).
I'll bet you breadboarded that circuit. If you had built it on a metal
chassis with a metal
front panel your problems would go away. You could also use a bread
board with a sheet
of metal tacked to the bottom of the board and to the backside of a
wooden panel (connected
together and grounded) and the 'hand effect' would also disappear.

1817. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 19:45:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6n6e5fj4h6lc2@corp.supernews.com>
Source record: 37170

There are a number of good ways to breadboard RF circuits. My favorite is "ugly construction". Start with a piece of copper-clad PC board material. The copper makes the ground plane. Solder grounded components, stood up on end, directly to it, and suspend others over it by soldering between grounded components. You can use high value resistors as standoffs where you need to span several components between grounded ones. ICs are laid down "dead bug" style. See if you can find a copy of "The Ugly Weekender" by Hayward & Hayward, originally published in QST in August 1981, but reprinted in a number of ARRL publications over the years. It shows the method in detail -- plus it describes a simple and good-performing 40 meter transceiver.

People are sometimes disappointed when they transfer an "ugly" breadboard to a PC board. It's much harder to maintain a good quality ground on a PC board than it is on an "ugly" breadboard, so the breadboard often works better than the PC board version. There's no need at all to make a PC board unless you intend to make several copies, are working at very high frequencies where the trace and pad impedances are important, or are working with surface mount components. You can do some "ugly" constructing with surface mount components, but I've found them to be pretty fragile. Leaded components tolerate board flexing much better than surface mount components. The metalized ends tend to break off the surface mount components when things flex, unless they're mixed in with some leaded components to take the stress.

Roy Lewallen, W7EL

scharkalvin wrote:
> Bert Herald wrote:
>
>> Thanks for the wealth of suggestions! This is a great newsgroup.
>>
>> I'm still working on my first circuit, which I now realize was
>> probably more
>> complicated than a true "beginner" circuit. But I did learn that winding
>> coils on pill bottles for Hartley oscillators doesn't work all that well
>> (it'll oscillate, but if you get your hand within 2 feet of the coil, or
>> blow on it, it will jump like a jackrabbit).
>
> I'll bet you breadboarded that circuit. If you had built it on a metal
> chassis with a metal
> front panel your problems would go away. You could also use a bread
> board with a sheet
> of metal tacked to the bottom of the board and to the backside of a
> wooden panel (connected

> together and grounded) and the 'hand effect' would also disappear.
>
>
>

1818. Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 19:45:49 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303090820.361a15b@posting.google.com>
Source record: 37171
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Why does the LM324 op amp need only one voltage supply when the LM741 needs two? Can anyone help enlighten me on the difference between the single-supply and dual-supply op amps?

I recently realized that the LM741 needs both supplies, even for amplifying positive DC voltages. With only the positive supply present, an input of 0V produces an output supply of AT LEAST .3V (even more with enough gain) regardless of configuration.

According to the literature and some circuit designs I have seen, the LM324 only needs one power supply. But in PSPICE, the LM324 needs two power supplies. Does the LM324 have an internal DC-DC converter or some other method to provide the negative power supply? If the LM324 only needs one power supply in real life, then why does it still need the second in PSPICE? Have I stumbled upon a limitation of PSPICE?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

1819. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 20:19:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BA1C8.1050009@ieee.org>
Source record: 37172
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?

The LM324 is designed for +5v TTL compatibility. The LM741 is not.
The specs on the LM741 are better than the LM324 unless you require
a single voltage supply.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1820. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 20:49:01 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <pwednYtVx6EhNfajXTWcoA@comcast.com>
Source record: 37173
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

It largely boils down to common mode range. If you run a 741 between +5 and -5 volts, the input common mode range might be +/- 3 V (guessing here). Now if you run the thing between ground and +10V, you have to be sure the input voltage on NEITHER input pin falls below +2V. You can operate a 741 off a single supply if you are AC coupled, and the inputs are biased up at half the supply voltage. You don't need DC/DC converters to have the common mode range extend to ground. They might use PNP emitter follower or JFET inputs. Look at an LM324 data sheet, it should explain everything.

Tam/WB2TT
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0303090820.361a15b@posting.google.com...
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?
>
> I recently realized that the LM741 needs both supplies, even for
> amplifying positive DC voltages. With only the positive supply
> present, an input of 0V produces an output supply of AT LEAST .3V
> (even more with enough gain) regardless of configuration.
>
> According to the literature and some circuit designs I have seen, the
> LM324 only needs one power supply. But in PSPICE, the LM324 needs two
> power supplies. Does the LM324 have an internal DC-DC converter or
> some other method to provide the negative power supply? If the LM324
> only needs one power supply in real life, then why does it still need
> the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

1821. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 21:07:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nb8kfchrj4aa@corp.supernews.com>
Source record: 37174
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

The difference between single and dual supply op amps has to do with internal design. Single supply op amps don't have any internal negative supply -- the internal circuitry is designed to operate normally when run from a single supply. But then of course you can't swing its output beyond its supply terminal voltages. Some op amps can tolerate inputs a bit beyond the supply terminal voltages, though, because JFETs, for example, can be biased this way and still operate normally.

Of course, you can float a single supply op amp between positive and negative supplies or a dual supply op amp between ground and a single supply. But you have to make sure you keep the input and output within the specified ranges relative to the supply pins, and this is often inconvenient.

I don't know anything about the SPICE model you have, but I'd look for another one if the one you have doesn't seem to mimic the real device.

Roy Lewallen, W7EL

Jason Hsu wrote:
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?
>
> I recently realized that the LM741 needs both supplies, even for
> amplifying positive DC voltages. With only the positive supply
> present, an input of 0V produces an output supply of AT LEAST .3V
> (even more with enough gain) regardless of configuration.
>
> According to the literature and some circuit designs I have seen, the
> LM324 only needs one power supply. But in PSPICE, the LM324 needs two
> power supplies. Does the LM324 have an internal DC-DC converter or
> some other method to provide the negative power supply? If the LM324
> only needs one power supply in real life, then why does it still need
> the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

1822. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 21:30:50 UTC
From: dplatt@radagast.org
Message-ID: <v6nckamecoob00@corp.supernews.com>
Source record: 37175
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

In article <f7d9a152.0303090820.361a15b@posting.google.com>,
Jason Hsu <jason_hsu@my-deja.com> wrote:

>Why does the LM324 op amp need only one voltage supply when the LM741
>needs two? Can anyone help enlighten me on the difference between the
>single-supply and dual-supply op amps?

You can run any standard op amp on a single-voltage supply. The op amp itself can't tell the difference between a single supply and a dual/split supply! The op amp has no "ground" pin and it really has no idea what the system-ground voltage is.

The real factor which distinguishes between "single-supply" and "dual-supply" op amps, is more properly the question of the input and output voltage ranges. Many op amps will not behave properly if their IN+ or IN- pins are pulled to within a volt or three of either voltage-supply pin - they may fail to deliver their specified behavior, or may exhibit some fairly gross problems such as latch-up.

Similarly, many op amps cannot drive their output all the way "to the rail" - there may be a range of 2-3 volts between the op amp's most positive output voltage, and the positive voltage supply.

In both cases, you can probably figure out why this is the case by looking at the schematic (detailed or simplified) in the manufacturer's data sheet. Figure out what will happen if you pull an input pin all the way to one of the supply rails. You'll often see that you'll force part of the input circuitry into a weird state... forward-biasing the junction on a JFET or something like that. Look at the output circuitry, and see why it's not actually capable of pulling the output all the way up to the rail.

Older op amps like the 741 tend to have fairly large "no go" voltage ranges... circuits using them shouldn't try to drive inputs to within a couple of volts of the supply rails, and should't expect output voltages outside of this range.

You _can_ use an op amp like this with a single voltage supply, as long as your input and output voltages will be within acceptable ranges. For example, driving a 741 from +15 volts, and using it to buffer the output of a trimmer-potentiometer arrangement where the pot's output would always fall between +5 and +10 volts, would probably work just fine.

Newer op amps can be designed with 'rail-to-rail' inputs and outputs... the inputs can safely be driven all the way up to the

positive supply voltage, all the way down to the negative supply voltage, and the outputs can often go the whole way as well (although perhaps not with a lot of current-drive capability). The rail-to-rail inputs are often safe (predicable) even if you drive the inputs past the rails by a few tenths of a volt.

An op amp of this sort can be used with a single voltage supply with one side grounded (e.g. +5 and ground) and be able to handle signals in this entire voltage range, or at least all the way down to ground.

This is what you'll usually see, in the spec sheets for a "single supply" op amp.

>According to the literature and some circuit designs I have seen, the
>LM324 only needs one power supply. But in PSPICE, the LM324 needs two
>power supplies. Does the LM324 have an internal DC-DC converter or
>some other method to provide the negative power supply?

Nope. It just has internal circuitry which won't misbehave if the inputs are driven all the way down to the negative rail (which would be at 0 volts in most single-supply situations) and which can pull the output all the way down to ground.

> If the LM324
>only needs one power supply in real life, then why does it still need
>the second in PSPICE? Have I stumbled upon a limitation of PSPICE?

I believe that the "single supply in real life" reflects the actual usability of the LM324. The PSPICE model reflects the internal circuitry, which _does_ have two supply inputs which source or sink current into the internals.

To model the use of an LM324 in a single-supply application, just connect the negative supply input to 0 volts DC.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1823. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 21:38:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j3dn6v8tp17ftutfmlgj4hn4emiglqgf6r@4ax.com>
Source record: 37176
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 9 Mar 2003 11:45:49 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>Why does the LM324 op amp need only one voltage supply when the LM741
>needs two? Can anyone help enlighten me on the difference between the
>single-supply and dual-supply op amps?
>
>I recently realized that the LM741 needs both supplies, even for
>amplifying positive DC voltages. With only the positive supply
>present, an input of 0V produces an output supply of AT LEAST .3V
>(even more with enough gain) regardless of configuration.
>
>According to the literature and some circuit designs I have seen, the
>LM324 only needs one power supply. But in PSPICE, the LM324 needs two
>power supplies. Does the LM324 have an internal DC-DC converter or
>some other method to provide the negative power supply? If the LM324
>only needs one power supply in real life, then why does it still need
>the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
>Jason Hsu, AG4DG
>usenet@@@@jasonhsu.com

Hi Jason,

You should dust off your undergrad lab books. Look at your 2nd or 3rd year work that you breezed past. The issues above are very elemental.

Get away from PSPICE or any derivative of SPICE and get back into the lab. You should really try learning one thing at a time, and that one thing should be the Op-Amp NOT a software package.

73's
Richard Clark, KB7QHC

1824. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 22:17:43 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e6bbd7e$0$148$edfadb0f@dtext02.news.tele.dk>
Source record: 37177

Hello

There is a good side here with a simple short wave reciever
built the ugly way, nice pictures and schematic.

http://www.njqrp.org/regen/index.html

Regards Max

1825. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-09 22:41:37 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <yiPaa.18653$Dp.16835@fe01.atl2.webusenet.com>
Source record: 37178

Thaks, Roy, for trhe response. And all the others too.

Right now I am just curious as to how well they work. I hadn't thought of the temperature stability problem, but it makes sense. Of couse you would have this same problem with any oscillator circuit.

I was curious because the article I have indicates that the IM products are a whole lot lower comapred to a varicap. This is when used in a bandpass circuit.

Jim
N8EE

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6i0mv3orqgv81@corp.supernews.com...
> I haven't tried it myself, so can give only a few suggestions. One would
> be to use a toroidal ferrite core -- toroid because the lack of a gap in
> the magnetic path will make saturation easier, and ferrite because it
> saturates much more easily than powdered iron. You'll want to use one of
> the 60 - series, high frequency ferrites or equivalent to get decent Q.
> The current will obviously have to be very clean to avoid FM, just like
> you need to use a very clean voltage for a varicap. And you'll have to
> have a good way to decouple the control current from the RF. I doubt
> that the temperature stability would be very good, and you're very
> likely to have hysteresis due to residual magnetism -- returning the
> current to zero won't produce the same frequency as you got before
> applying current. These might be tolerable in a closed loop system like
> a PLL, but probably not in a free-running VFO.
>
> Good luck. Let us know what you find out.
>
> Roy Lewallen, W7EL
>
> JLB wrote:
> > I have a magazine article that I tore out of 'Applied Mircrowave $
Wireless'
> > magazine. Unfortunately, the even numbered pages, where the date would
be,
> > is all advertisements, so no date! Also, unfortunately, the last page
of
> > the article is lost, which would include the conclusions and
bibliography.
> >
> > This article describes a voltage (well, actually current) controlled
> > inductor that can be used in an RF oscillator. The basic idea is to

wind
> > two coils on a magnetic core, like a high turns ratio transformer. One
coil
> > is the 'normal' inductor in the RF oscillator. A DC current is then
applied
> > to the other coil. The frequency of the oscillator can then be
controlled
> > with the amount of DC current.
> >
> > I have tried searching the web for more information, but have not found
> > anything. The key word in the article is 'transductor', and I have
found
> > other things called this but not what what this article describes.
> >
> > Anyone know any more about this, or know a web site? The pages I have
do
> > have some interesting photographs comparing the output of two
oscillators,
> > one controlled with a varicap and one controlled with the 'transductor'.
> > The one with the transductor has a lot less spurious output.
> >
> > Jim
> > N8EE
> >
> >
> >
>

1826. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 00:05:41 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047254741.526637@auth2.dns.griffin.net.uk>
Source record: 37179

thanks people.still hunting for info...there seems to be lots of designs out there,looking for something simple to build and not too expensive..i have an HP spec. anal. at work for the accurate stuff, i just need something to set up amps and transmitters/filters etc at home..i dont want too spend too much time making the analyzer, more using it..i have plenty tuning cans from various devices catv sat tv etc, and wish to use them...
simon g0zen

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1047171197.958438@auth2.dns.griffin.net.uk...
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using
it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>

1827. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 00:47:19 UTC
From: la8ak.xnd@online.no
Message-ID: <3e6bd786.7872367@news.online.no>
Source record: 37180
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sun, 09 Mar 2003 21:30:50 -0000, dplatt@radagast.org (Dave Platt)
wrote:
>
>You can run any standard op amp on a single-voltage supply. The op
>amp itself can't tell the difference between a single supply and a
>dual/split supply! The op amp has no "ground" pin and it really has
>no idea what the system-ground voltage is.
>
>The real factor which distinguishes between "single-supply" and
>"dual-supply" op amps, is more properly the question of the input and
>output voltage ranges. Many op amps will not behave properly if their
>IN+ or IN- pins are pulled to within a volt or three of either
>voltage-supply pin - they may fail to deliver their specified
>behavior, or may exhibit some fairly gross problems such as latch-up.
>
Probably, the best answer in the thread.
Whether a device is mentioned as dual or single voltage device is
based on some understanding when it was written. A lot of designers
once believed that op-amps needed + and -15V to work properly.

uA741 won't operate properly below 10...12V supply, but in my Apple
2e+ computer it was run on +5V (cassette interface). It was rather
uncertain if it produced error or not, so you needed to play the
cassette several times, but an RCA 3140E improved very much on this.

Motorola and National made the Norton type op-amps which were supposed
to be for single supply, but I don't really believe they became much
popular. LM358 and LM324 will run properly on low voltage, but the
output swing is rather limited. The output may be pulled down to
ground (negative rail).

>Similarly, many op amps cannot drive their output all the way "to the
>rail" - there may be a range of 2-3 volts between the op amp's most
>positive output voltage, and the positive voltage supply.
>
Here, in fact uA741 is better for dc voltage below, but close to +Vcc,
and a good reason for keeping some in the junkbox. It may amplify
signals close as 0.6V to +Vcc

>In both cases, you can probably figure out why this is the case by
>looking at the schematic (detailed or simplified) in the
>manufacturer's data sheet. Figure out what will happen if you pull an
>input pin all the way to one of the supply rails. You'll often see
>that you'll force part of the input circuitry into a weird state...

>forward-biasing the junction on a JFET or something like that. Look
>at the output circuitry, and see why it's not actually capable of
>pulling the output all the way up to the rail.

Yes, it is always important to understand why and what happens inside,
it is bad that several modern devices aren't properly described, and I
am not particularly talking about OP-amps. It is many interesting
applications you can use a device for, but data isn't proper.
>
>Older op amps like the 741 tend to have fairly large "no go" voltage
>ranges... circuits using them shouldn't try to drive inputs to within
>a couple of volts of the supply rails, and should't expect output
>voltages outside of this range.
>
>You _can_ use an op amp like this with a single voltage supply, as
>long as your input and output voltages will be within acceptable
>ranges. For example, driving a 741 from +15 volts, and using it to
>buffer the output of a trimmer-potentiometer arrangement where the
>pot's output would always fall between +5 and +10 volts, would
>probably work just fine.
>
>Newer op amps can be designed with 'rail-to-rail' inputs and
>outputs... the inputs can safely be driven all the way up to the
>positive supply voltage, all the way down to the negative supply
>voltage, and the outputs can often go the whole way as well (although
>perhaps not with a lot of current-drive capability). The rail-to-rail
>inputs are often safe (predicable) even if you drive the inputs past
>the rails by a few tenths of a volt.
>
>An op amp of this sort can be used with a single voltage supply with
>one side grounded (e.g. +5 and ground) and be able to handle signals
>in this entire voltage range, or at least all the way down to ground.
>

73, Jan-Martin
LA8AK
http://home.online.no/~la8ak/

--
remove ,xnd to reply

1828. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 01:31:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nqnhs19vrn6a@corp.supernews.com>
Source record: 37181

The temperature stability is likely to be worse with the saturation-tuned circuit than with a conventional one because of the material you're stuck with making the inductor out of. If you're making a conventional one, you can use materials that are relatively temperature stable, like type 6 powdered iron. For the saturation tuned oscillator, you're pretty much stuck with ferrite unless you're willing to use a *lot* of current. There's also the possibility that the amount of saturation will be a function of temperature, which will further degrade stability.

I's suspicious about intermod in an oscillator -- there should be only one frequency present, so there's nothing to mix with. Harmonics will mix only to make other harmonics. If the tuning range is limited, harmonics can be taken care of with a filter.

I haven't made a varicap oscillator myself, but know that there are techniques to keep the output pure and low noise. I'd be sure that a poorly designed varicap design would be pretty ugly, but I also know they can be made to be quite clean. I'd take a look at Rohde, Whitaker and Bucher's _Communications Receivers_ for some ideas.

Roy Lewallen, W7EL

JLB wrote:
> Thaks, Roy, for trhe response. And all the others too.
>
> Right now I am just curious as to how well they work. I hadn't thought of
> the temperature stability problem, but it makes sense. Of couse you would
> have this same problem with any oscillator circuit.
>
> I was curious because the article I have indicates that the IM products are
> a whole lot lower comapred to a varicap. This is when used in a bandpass
> circuit.
>
> Jim
> N8EE

1829. Re: WTB: KIM-1 Kimsi Motherboard (S-100)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 01:43:50 UTC
From: Orval Chadsey <n6ozi@earthlink.net>
Message-ID: <3E6BEDC3.1040106@earthlink.net>
Source record: 37182
Cross-posted to: alt.ham-radio.marketplace,adiaz224@earthlink.net,rec.radio.amateur.homebrew,rec.radio.swap

Alan wrote:
> I'm looking for an S-100 Kimsi Motherboard that enables a KIM-1 to be
> expanded using S-100 boards. Please email me directly if you have one or
> something similar. Thanks.
> Alan
>
>

No, but I do have a KIM-1, complete with all documentation in the
original box, plus 4K of 21L02 chips. Interested?

Orval N6OZI
San Francisco, CA USA

1830. Re: Shortened antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 02:31:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3e6bf563.15518852@news.online.no>
Source record: 37183

On Sat, 8 Mar 2003 08:19:48 +0100, "Torbj&#65533;rn Morka" <tmorka@online.no>
wrote:

```
>> If you are looking for help with design of a short, helically-wound,
>> 1/2-wave dipole, resonant at 3.7 MHz, then download program MIDLOAD.
>>
>> ======================
>> Regards from Reg, G4FGQ
>> For Free Radio Design Software
>> go to http://www.g4fgq.com
>> ======================
>>
>
>Excellent site, good work my man !!!
>
he is an OM,
remember G3OOQ told me about his helical wound mobile aerial, he
claimed to have worked all over Britain on 160m using this aerial, but
it is too much work, perhaps the reason why so few cares to try?

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/

--
remove ,xnd to reply
```

1831. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 03:58:27 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <6a3o6v8cd802pbj601tdd2cl2laun06urt@4ax.com>
Source record: 37184

On Fri, 7 Mar 2003 20:04:55 -0800, <?> wrote:

>Hi,
>
>I plan to modify an old RadioKit 75 meter SSB transceiver for 20 meters by
>retuning the receiver and transmitter filters. It uses a 9 MHz IF and 5-5.5
>MHz VFO. Do I need to move the BFO frequency from the high side to the low
>side of the IF filter passband to get USB operation on 20 meters?
>
>73,
>
>Jim
>N7IHQ
>

One of you had it right to start with and then changed his mind.

You DO need to switch side bands when going to 20 meters.
If the SSB signal is generated at 9 MHZ and a 5 MHZ vfo is used, the
side bands do NOT get inverted when going from 80 to 20.

Figure it out. 9000 - 5000 = 4000. Modulate the 9000 khz with a 1 khz
tone in the lower side band position. The tone will be at 8999 khz.
8999 - 5000 = 3999 khz. The tone is 1 khz below the carrier as would
be expected.

Now use the same 1 khz tone still in the lower side band position
(8999 lower side band signal) and add 5000 rather than subtract it.
8999 + 5000 = 13999 khz. You still get the lower side band on 20
meters as you did on 80 meters. The carrier frequency is at 4000 on 80
and the carrier frequency is at 14000 on 20 meters. the tone is 1 khz
below the carrier in both cases. The side band does not invert.

If the side band signal was generated at 5 mhz and a 9 mhz vfo was
used then it would invert. Any time you move the side band signal from
below the vfo signal to above it, then it inverts.

In generating the side band signal at 9 mhz, to get on 40 meters you
need to triple the vfo to 15 mhz (actually 16 mhz). This puts the vfo
above the side band signal and also inverts it.

One other note on putting the rig on 20 meters. You will probably have
to install a 15 mhz trap in the driver stage to the final to get rid
of the 3rd harmonic of the vfo. It will be too close to 14 mhz and
will appear in the output.

73
Gary K4FMX

1832. Re: Non digital VFO frequency stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 05:25:10 UTC
From: averyfineman@aol.com
Message-ID: <20030310002510.09900.00002445@mb-fc.aol.com>
Source record: 37185

In article <QrHaa.173338$4F3.10912426@news2.east.cox.net>, " Uncle Peter"
<radioconnectionNO@cox.netSPAM> writes:

>Weren' the huff'n'puffs simple one digit counters that
>provided a DC correction to a varicap in the osciallator?
>IIRC, they worked best on oscillators that good short term
>stability to begin with. Ham Radio ran a bunch of construction
>articles on the technique, and HR is now on CD.

A stabilizer can be "one digit" or many digits. The principle
is the same.

Articles from HR and QEX are available for free download
from Hans Summers site mentioned in another message.
www.hanssummers.com gets you to home page.

HR on CD is $150 for three discs covering their entire 22
year publishing span. I am familiar with HR after being on
their masthead for a couple years. :-)

Len Anderson
retired (from regular hours) electronic engineer person

1833. Power Supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 05:54:11 UTC
From: "karthikayan9 at netscape.net karthikayan9 at netscape.net"
Message-ID: <HBIr31.7Gn@sysadm.physics.uiowa.edu>
Source record: 37186

I have a power supply from an old pentium computer. Is there any way I can fix it to drive a ICOM 718 (needs 13.8V, 20A max)? Finally are the power supplies that drive the ICOM radios linear or switched power supplies?

1834. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 08:56:40 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303100056.7812f148@posting.google.com>
Source record: 37187

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<v6jqk6fa33e95b@corp.supernews.com>...
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v6igop8thr1a52@corp.supernews.com...
>
> > you'll find that your brain becomes a more effective filter, and narrow
> > filters tend to ring and blur higher speed CW, making your preference
> > change to wider bandwidth as you get better.
>
> Although it is true that narrow filters so "blur" the CW (the math says so),
> the effect really isn't significant at practical speeds (below about 40
> wpm). Narrow filters do tend to have a hollow sound which can be annoying,
> however. Narrow filters used to have a significant ringing effect, which
> could make high speed, heck, even moderate speed, CW difficult, but I
> haven't seen that in a while, perhaps computer designed filters made that go
> away, I'm not sure.

I think the DSP filters I can make on my computer ring a good bit less
than the steep IF filters in a radio. Actually, they hardly seem to
ring at all .
>
> A big advantage to a narrow filter is that, not only does the filter whack
> out interference, but it also whacks out band noise. From that perspective,
> the narrow filter is a big win.

True, but if by whacking out the band noise, some of the desired
signal is lost, sometimes the s/n ratio will not improve much. I like
that aspect of it, but I don't like to get carried away with it. Cut
too much, and you start cutting part of the frequencies of the signal
you want to hear. It will vary with cdx. I've had cases on say 160m,
where a wide open SSB filter was better than a narrow one, but I've
also seen the reverse.
>
>
>
> Someone suggested 400 which seems to me to be not a bad compromise if your
> filter has pretty steep skirts. If you are making up a filter with, say, 3
> or 4 crystals, I'd go a little narrower since you aren't going to get real
> steep skirts and the wider filter won't have such a big advantage. If you
> are going to buy a Collins mechanical filter with a breathtaking drop off
> the edges, perhaps a little wider would be in order.

Probably a good idea. Myself, I vary according to the band cdx. If the
band is not crowded, I usually run about 1000 hz. My best CW rig is a
TS-830. It's VBT will tune from 500-2400 hz continuously with just the

stock SSB filter. With the 500 hz CW filter, it's about 150-500 hz using the VBT. At 150 hz, it's so tight as to be almost unusable. In the real world, I almost never use the 500 hz filter. I usually use the SSB filter and the VBT to tune about 1000 hz wide. I'll crank down to about 500-600-700 hz if the freq gets busy. The "500 hz" with the SSB filter is not as steep as the actual 500 hz CW filter. I actually prefer it wider most of the time. I don't like the pitch of the "band noise" with the tight CW filter. It's kind of annoying to me. But I can change the pitch with the IF shift.
With that radio I often use the notch to cut "band noise" on 160m. It works well, and it's variable pitch. I peak the signals with the IF shift once the VBT is set to the width I want. Only in a busy field day or contest type deal might I use the narrow CW filter. But even thinking back last summer, I think I used about 800-1000 hz most of the time on 80/40 meters. I can narrow it up with a quick turn of the VBT knob if I need to. The 830 spoils me on CW compared to my other radios. :/ It really works well. And it's a 20 year old radio too. Add my outboard computer DSP to it, and it's really killer. But that's overkill for the 830. It doesn't really need it. I use it on the IC-706 more. I don't have a CW filter in my 706 yet. The DSP filters work pretty well for it. I do need to get a real filter though for portable use though. I'll probably get a 500 hz, although the 350 hz is a bit cheaper I think. Anyway, 400 hz is a pretty narrow filter in most cases if it's steep sloped. About as narrow as I would ever use, even in a worst case.
Some like the razor blade narrow 200-250 hz filters, but not me. MK

1835. Mod. CB coupler for Ham bands

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 10:25:42 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <p8po6v02709g3gplflq0itt4ctce1rrj2e@4ax.com>
Source record: 37188
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi,

I have bought a second hand Zetagi M27 (http://www.zgitaly.it/)
antenna tuner this weekend with intention to modify it for ham band
use.

My intention is to substitute the internal coil with two terminals so
that I can have several coils and plug in whichever is more
appropriate for the band in use.

My questions are the following:

- Would it be worth removing the variable capacitors and mounting
them isolated from ground so that the circuit could be modified into a
T network instead of a PI network?

- Would it be dangerous as to RF exposure to mount the terminals so
that the new coil is _outside_ of the box and can be changed easily?
The TX power will be 100W.

Thanks,

ec3dds - Toni

1836. Re: Mod. CB coupler for Ham bands

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 11:57:33 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e6c7ccb.12921297@news.freeserve.net>
Source record: 37189
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 10 Mar 2003 10:25:42 GMT, Toni - ec3dds <ec3dds@hotmail.com>
wrote:

>Hi,
>
>I have bought a second hand Zetagi M27 (http://www.zgitaly.it/)
>antenna tuner this weekend with intention to modify it for ham band
>use.
>
>My intention is to substitute the internal coil with two terminals so
>that I can have several coils and plug in whichever is more
>appropriate for the band in use.
>
>My questions are the following:
>
>- Would it be worth removing the variable capacitors and mounting
>them isolated from ground so that the circuit could be modified into a
>T network instead of a PI network?
>
>- Would it be dangerous as to RF exposure to mount the terminals so
>that the new coil is _outside_ of the box and can be changed easily?
>The TX power will be 100W.
>
Tony, take a look at this page...
http://www.qsl.net/m3msm/atu/atu.htm

I've used the capacitors from the M27 in its construction and it works
fine on powers up to about 50 watts. I don't think I'd like to try it
at higher powers though.
BEWARE the capacitor mounting screws, they are a strange thread and
very easily damaged. I had to re-tap with 4BA when I stripped mine ;-(

hth Mike W, G8NXD aka M3MSM qthr

1837. Re: Some of these older tube rigs really make modifications "interesting".

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 16:20:41 UTC
From: troglodite@aol.com
Message-ID: <20030310112041.09429.00000209@mb-fk.aol.com>
Source record: 37190

>These older rigs, don't you just love 'em. :c)

Yes. Running one of the old transmitters is a lot like running a steam locomotive. You have to pay close attention or ... boom! But, at least you can see all the parts without a magnifying glass. One knob tuning? Who want's that? I LIKE to adjust things. My old GO-9 transmitter had about 14 adjustments between the VFO and the antenna. It gave you something to DO.

Doug Moore KB9TMY (Formerly K6HWY)

1838. Re: Shortened antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 16:27:57 UTC
From: Torbj&#65533;rn Morka <tmorka@online.no>
Message-ID: <b23ba.35993$Rc7.510372@news2.e.nsc.no>
Source record: 37191

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e6bf563.15518852@news.online.no...
> On Sat, 8 Mar 2003 08:19:48 +0100, "Torbj&#65533;rn Morka" <tmorka@online.no>
> wrote:
>
>
> >> If you are looking for help with design of a short, helically-wound,
> >> 1/2-wave dipole, resonant at 3.7 MHz, then download program MIDLOAD.
> >>
> >> ========================
> >> Regards from Reg, G4FGQ
> >> For Free Radio Design Software
> >> go to http://www.g4fgq.com
> >> ========================
> >>
> >
> >Excellent site, good work my man !!!
> >
> he is an OM,
> remember G3OOQ told me about his helical wound mobile aerial, he
> claimed to have worked all over Britain on 160m using this aerial, but
> it is too much work, perhaps the reason why so few cares to try?
>
> 73
> Jan-Martin
> LA8AK
> http://home.online.no/~la8ak/
>
>
> --
> remove ,xnd to reply

Maybe it would be better to try out a long wire, and the use of a
heliumfilled balloon...

73'

Torbjorn.

1839. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 16:31:16 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <QKqdnTlFxclMIPGjXTWcow@comcast.com>
Source record: 37192

Also consider http://www.tentec.com/rcvrkit.htm

Tom, N3IJ

"Bert Herald" <bert.herald@worldnet.att.net> wrote in message
news:ZtMaa.10347$Oz1.642456@bgtnsc05-news.ops.worldnet.att.net...
> Thanks for the wealth of suggestions! This is a great newsgroup.
>
> I'm still working on my first circuit, which I now realize was probably
more
> complicated than a true "beginner" circuit. But I did learn that winding
> coils on pill bottles for Hartley oscillators doesn't work all that well
> (it'll oscillate, but if you get your hand within 2 feet of the coil, or
> blow on it, it will jump like a jackrabbit). I procured some ferrite rods
> from an elmer friend. I need some torroid cores still. Problem I have is
I
> end up with way more inductance than I want with only 1 or 2 turns!
>
> It's a lot of fun. I enjoy the learning aspects more than getting a
> functioning radio (I've already got many of these), although it would be
> nice to eventually end up with one!
>
> 73,
> Bert
>
>

1840. What crysal filter should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 17:20:06 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4ihcq$1t456n$1@ID-150848.news.dfncis.de>
Source record: 37193

Hi.

In order to prevent overloading the 2nd mixer that follows, I need to substitute a simple LC resonant circuit for a crystal filter in the 1st IF section. The carrier frequency of a signal will land on 5172.4 Khz. Because the way the rx works, a 3 Khz wide LSB signal on 80/40 or a 3 khz wide USB signal on 20/1510 would extend from 5172.4 Khz to 5175.4 Khz.

The way I've arranged things, any filter must pass the CW signal without attenuation on 5172.4 Khz and must also pass SSB whose carrier is at 5172.4 Khz. (If I ignored the CW aspect, I know, I could put in a 3 Khz wide filter centered on 5173.9 Khz, but I cannot ignore the CW signal).

My thoughts were that since my main filtering will be at 455Khz, I could put in a 6Khz wide filter centered on 5172.5 Khz. This way I could receive USB on 80/40 and LSB on 20/15/10 if I wanted to, and a CW signal is bang in the center.

If I'm not going to want to listen to USB on 80/40 or LSB on 20/15/10 I guess something like a 4Khz filter would do, with the CW signal having to be slightly off the centre.

But, given my main filtering would be on 455 Khz, could I just as well use a 10, 20 or 30Khz filter?

(In practice, center frequency may be moded, I mean, where do you get filters centered on 5172.4 Khz). :c)

Thanks for your help. Rich.

1841. Re: What crysal filter should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 17:32:26 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4ii41$1uus7i$1@ID-150848.news.dfncis.de>
Source record: 37194

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b4ihcq$1t456n$1@ID-
>
> The way I've arranged things, any filter must pass the CW signal without
> attenuation on 5172.4 Khz and must also pass SSB whose carrier is at
> 5172.4 Khz. (If I ignored the CW aspect, I know, I could put in a 3 Khz
>wide filter centered on 5173.9 Khz, but I cannot ignore the CW signal).

My mods mean I cannot ignore the CW signal on 5172.4 Khz, a filter has to pass it.
Interestingly the companion TX (FL50B) incorporates 5173.5 Khz xtal filter, so there
might be some around.

1842. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 17:45:08 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0303100945.2e6c0b24@posting.google.com>
Source record: 37195

Sam,
Thanks for the information. I would sure be interested in learning more about the process you use. I went to the Think and Tinker web page http://www.thinktink.com/ and it is a good resource. Do you know what the shelf life of the photoresist film is? It would take me a while to use up 50 feet of it.
JBH

1843. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 18:16:21 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <fE4ba.46$OE2.3@news.inreach.com>
Source record: 37196

Gary:

You are correct. I was one of the those who had it wrong before. I had done the math in my head and I'm not so good at that. I had also been thinking of Anthony Vitale's "Cheap and Easy SSB" from many decades back. He used a 9 mHz IF and 5 mHz VFO to get both 80 and 20 meter SSB. My memory (faulty) told me the LSB/USB selection was automatic, determined by the mixing scheme. I went back to look at his article and discovered that he used a sideband selector switch to change from USB to LSB; it was not automatic.

And my old Swan 350, which only had one BFO crystal and automatically provided LSB on 80 and 40 and USB on 20, 15 and 10 meters had, as you described a 5.?? mHz IF and higher frequency VFO.

Thanks for clarifying this.

Roger K6XQ

1844. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 18:28:21 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <2H4ba.20059$Dp.2856@fe01.atl2.webusenet.com>
Source record: 37047

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6nqnhs19vrn6a@corp.supernews.com...

> I's suspicious about intermod in an oscillator -- there should be only
> one frequency present, so there's nothing to mix with. Harmonics will
> mix only to make other harmonics. If the tuning range is limited,
> harmonics can be taken care of with a filter.
>

As I stated, Roy. The incomplete article I have compared two bandpass filters, not oscillators (of course the end of the article is missing). One used a varicap and the other used a saturated inductor for tuning. They did a standard two tone test. There was a significant reduction in the 2nd order intermod with the saturated inductor. A definite but less significant drop in the 3rd order intermod.

Maybe if they aren't good enough for oscillators they might be ok for preselectors or transmitter filters.

Jim
N8EE

1845. AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 20:42:36 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b4it63ibp1@nyytiset.pp.htv.fi>
Source record: 37048

Hi,

surprisingly, I've managed to get the AD9854 to behave without much trouble, wow. I'm running it in parallel mode, update clock switched to externally controlled, and PLL turned off for now.

Ok, maybe less suprising, there's a "little" problem - there isn't any AC output on the I1 I1B I2 I2B pins, just some very boring DC levels. The AD9854 should have some data loaded into the frequency 1 register, but this just seems to kick the DC levels around, and still no sine output.

Maybe some of the AD9854 experts here could help me and suggest where to check for possible errors? I've checked almost everything and everything _seems_ ok but it still refuses to work... :-(

Here's some measurement data:

RESET 10kOhm to +3.3V (drawn low by the microcontroller)
PLL pin 3.3V
R-SET pin 3.9kOhm (as in datasheet) to ground, 1.24V
C-bypass 220nF to ground, 2.27V
I2 0Vdc
I2B 200mVdc
I1 500mVdc
I1B 100mVdc
I1, I2 resistors 56 ohm to ground
I1B, I2B resistors 25 ohm to ground

the AD9854 draws about 120mA even while RESET is held high. Is that ok??

all +3.3V rail decoupling caps are 220nF ceramic SMD
all resistors are 0805 chip resistors
all AVdd and DVdd pins are connected and decoupled with 220nF
all ground pins are connected, and some N/C pins are grounded
(shouldn't matter, right?)

You can see my AD9854 init source code at
http://www.hut.fi/~jwagner/dc-rx/firmware/MSP430-fw-dds.c

Basically, after RESET is pulled low, the io update clock starts putting out pulses. So the micocontroller does

DDS_writeByte(0x00, 0x1F); // 0x00=data, 0x1F=address

And the io update clock turns off, as expected. The 0x00 should also set mode 000 "single tone". Then the microcontroller is set to take over the

clock (uC ad9854-ioclk pin set as _output_ pin). The rest is a bit lengthy, you can see the register writes in the source code.

The freq 1 tuning word is still all zero after initialization stage, so a DDS_setFreq_kHz(50) tries to set 50kHz by writing something into that 48 bit register. The update clock is pulsed after each 8 bit transfer as it probably is supposed to be done, i.e 48/8=6 times for one full frequency register transfer. (hmm, uh-oh, i got a creeping suspicion here...)

Something must be slightly flawed here, but I can't find it... Any ideas?

Help and comments would be highly welcome!

many thanks!
- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

1846. Re: Power Supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 21:13:00 UTC
From: Ted <tk1932ga@speedfactory.net>
Message-ID: <3E6CFFDC.8AC9EE95@speedfactory.net>
Source record: 37049

Look here ! http://www.antennex.com/preview/archive3/powers.htm for a
switched supply

Ted in Atlanta KD4EE

"karthikayan9 at netscape.net" "karthikayan9 at netscape.net" wrote:

> I have a power supply from an old pentium computer. Is there any way I
> can fix it to drive a ICOM 718 (needs 13.8V, 20A max)? Finally are the
> power supplies that drive the ICOM radios linear or switched power
> supplies?

1847. Re: What crysal filter should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 21:16:32 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4iv89$20o31r$1@ID-150848.news.dfncis.de>
Source record: 37050

"Richard" <nearlynews_email@ntlworld.com> wrote in
message
news:b4ihcq$1t456n$1@ID-150848.news.dfncis.de...

> My thoughts were that since my main filtering will be
at 455Khz, I could put in a
> 6Khz wide filter centered on 5172.5 Khz. This way I
could receive USB on 80/40 and
> LSB on 20/15/10 if I wanted to, and a CW signal is
bang in the center.

Hehehe, you have got to be careful. What I said above
is not true. Why? Because flipping over sidebands (on
80 from LSB to USB, on 20 USB to LSB) whilst
accommodated by a 6Khz filter centred on 5172.5 Khz in
the 1st IF, will not be accomodated by the 3 Khz wide
455 Khz filter in the 2nd IF. Swapping sidebands
whilst on a particlar band, will put the sideband into
the stopband area of the second IF filter. Unless one
made provision for a xtal change, one of 3 Khz that
flipped the carrier frequency in the 2nd IF to the
opposite skirt of the filter.

1848. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 21:16:41 UTC
From: Ted <tk1932ga@speedfactory.net>
Message-ID: <3E6D00B9.ADE449D8@speedfactory.net>
Source record: 37051

A 50 foot roll is a bunch.... would you (or anyone else) be interested in splitting a roll (and the price !!!)

Ted in Atlanta KD4EE

"J.B. Hall" wrote:

> Sam,
> Thanks for the information. I would sure be interested in learning
> more about the process you use. I went to the Think and Tinker web
> page http://www.thinktink.com/ and it is a good resource. Do you know
> what the shelf life of the photoresist film is? It would take me a
> while to use up 50 feet of it.
> JBH

1849. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 22:12:19 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <ld3q6v8c6n57bp8mt4nlar9bs71hncarao@4ax.com>
Source record: 37052

On Mon, 10 Mar 2003 10:16:21 -0800, "Roger Leone"
<arleonexxblockxx@inreach.com> wrote:

>Gary:
>
>You are correct. I was one of the those who had it wrong before. I had
>done the math in my head and I'm not so good at that. I had also been
>thinking of Anthony Vitale's "Cheap and Easy SSB" from many decades back.
>He used a 9 mHz IF and 5 mHz VFO to get both 80 and 20 meter SSB. My
>memory (faulty) told me the LSB/USB selection was automatic, determined by
>the mixing scheme. I went back to look at his article and discovered that
>he used a sideband selector switch to change from USB to LSB; it was not
>automatic.
>
>And my old Swan 350, which only had one BFO crystal and automatically
>provided LSB on 80 and 40 and USB on 20, 15 and 10 meters had, as you
>described a 5.?? mHz IF and higher frequency VFO.
>
>Thanks for clarifying this.
>
>Roger K6XQ
>

Hi Roger,

Yes, I have to stop and think about it sometimes too. If I forget to
do the addition I get it screwed up. I have a 20A, same mixing scheme
as the "cheap and easy". I couldn't remember if I had to switch side
bands or not when going from 80 to 20. Did the addition and
subtraction to prove it.

What is backwards is the vfo tuning from 80 to 20.

In the early 60s I had built part of the W2EWL "cheap and easy side
band" rig. I used part of the circuit of it and parts from other rigs.
Wonder if you built one?

73
Gary K4FMX

1850. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 22:15:40 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0303101415.d9b3b0@posting.google.com>
Source record: 37053

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:<3e6a4429$0$138$edfadb0f@dtext02.news.tele.dk>...
> Hello Bert
>
> > I'm sure there are many sources for this, but I thought I'd get the lists'
> > opinions. I'm looking for a simple receiver circuit that will tune a wide
> > swath of the broadcast shortwave spectrum. I want it simple so that I can
> > learn how it works, so if images are present or selectivity/sensitivity
> > isn't the best, that's ok (not looking to build a Kenwood!). Preferably
> > constructed from junkbox parts and inexpensive readily-available parts.
> Any
> > suggestions?
>
> I have the same idea, at the moment I am trying to colect the items
> that are used in the small reciever shown here
>
> http://www.jogis-roehrenbude.de/Bastelschule/12AT7-Radio/12AT7-Radio.htm
>
> I am planing to build one of these together with my son, he is 12 years now
> and it is time for him to learn the basic of radio and also the danger with
> high voltage and I think this is a perfect way to do it.
>
> Regards Max

Here's another 40-year-old radio that should do a good job, and in
particular should be able to drive a speaker easily:

http://www.jvgavila.com/compac.htm

Note that you wouldn't have to use that particular tube; a dual triode
(12AU7, 12AT7) followed by an output tube (6AQ5, 6AK6) would be one
non-compactron approach.

73,
Mike, KK6GM

1851. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 22:39:02 UTC
From: "H. Enquist" <multiman@canada.com>
Message-ID: <Xs8ba.859$mE2.59572@news20.bellglobal.com>
Source record: 37054

Thanks for all the input. My original question was sparked by the fact that an European friend of mine is using a Swedish positive photo resist product (spray) which is available in a inexpensive size can.

Seems that there is no such thing available this side of the pond....
Harry VE3MAL

"Ted" <tk1932ga@speedfactory.net> wrote in message news:3E6D00B9.ADE449D8@speedfactory.net...
> A 50 foot roll is a bunch.... would you (or anyone else) be interested in
> splitting a roll (and the price !!!)
>
> Ted in Atlanta KD4EE
>
> "J.B. Hall" wrote:
>
> > Sam,
> > Thanks for the information. I would sure be interested in learning
> > more about the process you use. I went to the Think and Tinker web
> > page http://www.thinktink.com/ and it is a good resource. Do you know
> > what the shelf life of the photoresist film is? It would take me a
> > while to use up 50 feet of it.
> > JBH
>

1852. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 22:53:34 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <mm5q6vofttpojmjbmcste3kfbe125lg4qv@4ax.com>
Source record: 37055

On Mon, 10 Mar 2003 22:42:36 +0200, "Jan Wagner" <jwagner@cc.hut.fi>
wrote:

>Hi,
>
>surprisingly, I've managed to get the AD9854 to behave without much
>trouble, wow. I'm running it in parallel mode, update clock switched to
>externally controlled, and PLL turned off for now.
>
>Ok, maybe less suprising, there's a "little" problem - there isn't any
>AC output on the I1 I1B I2 I2B pins, just some very boring DC levels.
>The AD9854 should have some data loaded into the frequency 1 register,
>but this just seems to kick the DC levels around, and still no sine
>output.
>
>Maybe some of the AD9854 experts here could help me and suggest where to
>check for possible errors? I've checked almost everything and everything
>_seems_ ok but it still refuses to work... :-(

> <snip>
>Something must be slightly flawed here, but I can't find it... Any
>ideas?
>
>Help and comments would be highly welcome!
>
>many thanks!
> - Jan

Just something quick to note, don't know if it's the problem.
The AD9854 has a mulitplier in front of
the DAC for which its default multiplier value is zero.
Therefore, you'll get DC at the output of the DDS until the multiplier
is bypassed or its multiplier value is raised.

Hope this might be the problem.

Chris Muriel, G3ZDM, Manchester, UK

1853. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 23:07:20 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <835q6v4efc7ndp26t75uvrq0c8dnj8j0d1@4ax.com>
Source record: 37056

On Fri, 07 Mar 2003 17:10:47 -0800, Roy Lewallen <w7el@eznec.com>
opined thusly:

>That's a good goal. I routinely make a simple Hartley that has about 200
>Hz warmup drift at 7 MHz and is adequately stable without any
>temperature compensation at all. It can be made even better yet by
>substituting some negative tempco capacitance for some of the NPO.

Do you find the Hartley configuration the best for this kind of
application, then? (HB QRP CW, I mean).
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1854. Re: What VFO specs for CW working?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-10 23:50:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6q961png1kdcf@corp.supernews.com>
Source record: 37057

Paul Burridge wrote:
> On Fri, 07 Mar 2003 17:10:47 -0800, Roy Lewallen <w7el@eznec.com>
> opined thusly:
>
>
>>That's a good goal. I routinely make a simple Hartley that has about 200
>>Hz warmup drift at 7 MHz and is adequately stable without any
>>temperature compensation at all. It can be made even better yet by
>>substituting some negative tempco capacitance for some of the NPO.
>
>
> Do you find the Hartley configuration the best for this kind of
> application, then? (HB QRP CW, I mean).

I haven't tried anything else. The temperature drift is that of the inductor itself -- heating and cooling the active device makes just about no difference at all. It starts readily, and operates over a wide voltage range. The frequency changes very little with supply voltage. The output is adequately clean and reasonable in amplitude. It's just about as simple as an oscillator can get. And I've never built one that failed to work, even up to 100 MHz. So I have little incentive to try anything else.

The one shortcoming of the FET Hartley is that the output amplitude is determined by the pinchoff voltage of the individual FET. So if multiple copies are being made, some accommodation should be made to compensate for different output levels. In that one respect, a bipolar transistor Hartley or Colpitts would be better. Whatever you design, a can of spray cold will tell you pretty quickly if you've done something seriously wrong with regard to temperature sensitivity.

Roy Lewallen, W7EL

1855. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 00:31:41 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E6D2E6D.8060007@bellsouth.net>
Source record: 37059

Mike Silva wrote:
> "Max" <Max_Jens@post9.tele.dk> wrote in message
news:<3e6a4429$0$138$edfadb0f@dtext02.news.tele.dk>...
>
>>Hello Bert
>>
>>
>>>I'm sure there are many sources for this, but I thought I'd get the lists'
>>>opinions. I'm looking for a simple receiver circuit that will tune a wide
>>>swath of the broadcast shortwave spectrum. I want it simple so that I can
>>>learn how it works, so if images are present or selectivity/sensitivity
>>>isn't the best, that's ok (not looking to build a Kenwood!). Preferably
>>>constructed from junkbox parts and inexpensive readily-available parts.
>>
>> Any
>>
>>>suggestions?
>>
>>I have the same idea, at the moment I am trying to colect the items
>>that are used in the small reciever shown here
>>
>>http://www.jogis-roehrenbude.de/Bastelschule/12AT7-Radio/12AT7-Radio.htm
>>
>>I am planing to build one of these together with my son, he is 12 years now
>>and it is time for him to learn the basic of radio and also the danger with
>>high voltage and I think this is a perfect way to do it.
>>
>>Regards Max
>
>
> Here's another 40-year-old radio that should do a good job, and in
> particular should be able to drive a speaker easily:
>
> http://www.jvgavila.com/compac.htm
>
> Note that you wouldn't have to use that particular tube; a dual triode
> (12AU7, 12AT7) followed by an output tube (6AQ5, 6AK6) would be one
> non-compactron approach.
>
>
> 73,
> Mike, KK6GM

There was also a receiver in popular electronics for 1967 that used a 12at7 and a 6ak6. It was
a band switched sw regen with one triode of the 12at7 used as a reflex grounded grid rf stage
and a grounded cathode af stage, the other triode was a regen detector, and the 6ak6 was
the power output stage. Used mini-inductor coils except for a 71-osc as the bcb coil.
I have this issue of PE someplace, if I can locate it I will scan it and post it here.

1856. Re: For all of those hobbiest who love 'keep it simple simon' projects, I've got an amazing FM receiver!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 00:32:48 UTC
From: Tracy Fort <tracy.fort@gimail.af.mil>
Message-ID: <apbq6vkfbo70icslavjets3o8ifpadd0pr@4ax.com>
Source record: 37060

I built this radio...It works great and is fun to build. The only part
that I did not get from rad shack was the tuner which I robbed out of
a toy radio that I got at goodwill.

Tracy

On 6 Feb 2003 21:10:52 -0800, braincambre500@yahoo.com (Patrick)
wrote:

>Hello all,
>
>I try to go to as many electronic/hobbiest forums to post my one
>transistor FM receiver. I know there are hobbiest out there who love to
>make simple circuits...and my project definately falls into that
>category.
>
>I could type for hours telling you of the extra-ordinary sensitivity and
>selectivity is has...but if you do read what Pedro...Phillip...and
>Murphy had to say about their maiden journey...you will never know what
>you are missing. And believe me, that is still an 'understatment'.
>
>Pedro was very sceptical in the beginning of getting a so called 'one'
>transistor FM receiver to function at all...much less work! But to his
>amazement, he carried out my instructions to a 't'...and it worked fine!
>
>I call this design...The Radio Shack Special...since all of the parts
>may be purchased there. I did not want to have hobbiests have to mail
>order ANYTHING. I kept that is mind with the design.
>
>Yes, it's a one transistor (MPF102) FM receiver. Of course, since the
>audio out is but a few milli-volts, it had to be beefed up with an
>LM386.
>
>When you get to my website, just scroll down until you see the words...
>
>
> The Radio Shack Special Project
>
>...from there you will be on your own...unless, for some reason, you
>should need my help. I will do anything I can to help you get it to work.
>I know it works....I have already made 10 of them.
>
>Even if you have never made a simple project before...I even have
>construction plans on ....how to make your first PCB (printed circuit

>board)...plus another section on how to make homemade coils...in which
>these two items are needed for the Radio Shack Special Project.
>
>Do let me know what you intentions are...if you choose to make the project,
>I would love for you to send pictures and a documentary after you have
>completed a successful journey. I will then make a special webpage, just
>for you and your project...for others to have more of an incentive...should
>they decide to make the project also.
>
>With that said....I will be here at my e-mail address, should you need
>ANY type of help with the project. That is what I am here for. Not just
>to post a typical schematic on the WWW, but to let all know that I am your
>backboard...should concerns come up along the way.
>
>How does it work? A few HAM operators have asked me that question. I also
>have the 'theoredical' on the website also....it gives an explanation on
>how superrenerative receivers operate.
>
>So my friend, do drop me a line should your interest continue. I will make
>a special folder just for you...for your pictures and documentary of the
>precious little jewel.
>
> ...and let the project begin!
>
>I want to thank each and everyone at this forum for giving me the time to
>type my request.
>
>Respectfully,
>
>Patrick Cambre Web site address: http://braincambre500.freeservers.com
>
> E-mail address: braincambre500@yahoo.com
>
>P.S. Sometimes my web site goes disabled...by keeping my e-mail on hand, I
>will personally attend to your concerns.

Tracy Fort

KE4ODD

tracy.fort@gimail.af<NOSPAM>.mil

remove <NOSPAM> for repliess

1857. Re: BFO for 9 MHz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 01:09:43 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <MHaba.62$u23.40@news.inreach.com>
Source record: 37061

> Wonder if you built one?
>
> 73
> Gary K4FMX

Gary:

No, I could never put my hands on the audio phase shift network, except by paying retail. It is still one of those things that may or may not happen. I did find somewhere an RF phase shifter (90 degrees shift from .5 - 1.5 mHz) made by Westinghouse, but it is still on the shelf.

Roger K6XQ

1858. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 02:59:42 UTC
From: dkcombs@panix.com
Message-ID: <b4jjeu$k3c$1@reader2.panix.com>
Source record: 37062
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

Thanks, everyone.

Looks like a trip to radio-shack real soon, for one
of those attenuator-cables.

Thank you!

David

1859. Re: Question on backpack 40m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 03:24:46 UTC
From: urovision@cs.com
Message-ID: <20030310222446.16758.00000073@mb-ce.news.cs.com>
Source record: 37063

I have seen and purchased connectors at hamfests to specificallt mount 2 hamsticks as a dipole. They are readily available

1860. fs or ft:Motorola micor 100 w.PA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 03:35:02 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <GPcba.395$fp4.367252@charlie.risq.qc.ca>
Source record: 37064

hi ,i have one PA of 100 watts ,vhf.
looking for trade

gervais
ve2ckn@hotmail.com

1861. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 04:07:11 UTC
From: alskdjfhg72000@yahoo.com
Message-ID: <3c7e4e8c.0303102007.2a2fda12@posting.google.com>
Source record: 37065

lugehall@hotmail.com (J.B. Hall) wrote in message
news:<bc96ecb7.0303100945.2e6c0b24@posting.google.com>...
> Sam,
> Thanks for the information. I would sure be interested in learning
> more about the process you use. I went to the Think and Tinker web
> page http://www.thinktink.com/ and it is a good resource. Do you know
> what the shelf life of the photoresist film is? It would take me a
> while to use up 50 feet of it.
> JBH

They also sell professional carbide drill bits which work very well.
I don't know of any shelf-life for the film; I've had mine for about
6-8 months, and it still works fine. But you can call them and ask.
It's preferable to store it at room temperature or lower, out of the
sun, etc. Keep it wrapped up in the black plastic and in the box
that it comes with unless you're cutting off a piece. Direct
incandescent lighting probably will not spoil the film while you are
working with it (at least not for several hours), but when I open the
roll, I open it in a darkened room anyway, with some incandescent
lighting coming from another room. Don't open it in flourescent or
daylight; with repeated use, the UV content may spoil the roll.
Extended periods of high heat will also spoil it. Putting it in
perspective, though, normal levels of flourescent lighting aren't
going to start spoiling a laminated board unless it sits out for for
than 5 or 10 minutes. In their info about the film, they also say
something about processing the board within 8 hours of laminating it.
Basically that's a cover-your-behind parameter, and it is not too
important unless you've severely over-heated the film when using it
(which initiates thermal polymerization). I've left laminated boards
sitting out at room temperature for over a week, and the film still
worked fine later (but they will last longer if you refrigerate them).

There are three layers to the film: there's a clear peel sheet on the
inside, which covers the adhesive part; the film itself, and then the
clear cover sheet on the outside.

I normally go into the bathroom (darkest place), though I turn on a
hall light so that I can see what I'm doing. Cut off just enough
film to cover your board (or as little as you want to experiment
with). It can be tricky to get the inner peel sheet off with your
fingernails, since it is a very thin film, but it is easy with a
couple of pieces of tape. Merely stick the two pieces of tape against
each other at one corner of the film, and then pull them apart. One
piece of tape will be remain attached to the bottom peel sheet, which
will peel away from the film; the other will remain attached to the

cover sheet, which will stay attached to the film (99% of the time). The film may not feel sticky at first, but if your fingers are slightly wet, they will eventually start to stick; so be light on the touch. I normally apply a 2%-5% alcohol solution by gliding my wet fingers along the inside of the film. The alcohol helps to soften up the adhesive, so the film will stick better to the board. You don't want to use more than about 5% alcohol, otherwise you may have trouble with bubbles forming under the film later. After you apply the film to a clean board, there will be so much moisture trapped under it that you will have a few seconds to position the film where you want it by sliding it around the board. After it's positioned where you want it, you can start rubbing the excess moisture out from under the film with a wadded-up towel. The towel helps soak up the solution as it bleeds out from under the film, and also helps distribute the pressure from your hand to help keep the film from stretching too much as you rub it out. Work in all directions, the idea is to get the film so flat that you can see the texture of the copper underneath it--while not getting wrinkles or leaving bubbles in the film. Generally speaking, the less moisture left under the film, the harder the pressure that you can safely apply. If too much pressure is applied early on, you may have a bit of trouble getting the corners to adhere properly (due to the film stretching out). It may take a few practice tries; I've found it easier to start out with small patches of film, maybe a couple of inches square, just to get used to how it works. Having another towel under the board also helps, but make sure that it is not too thick, as you don't want the board to flex too much as you are rubbing it.

If you are using a board that is larger than a few inches square, it is necessary to roll out the film with a rubber roller as a final application step. This ensures that the film is bonded fully with the board, and that there is as little moisture as possible under it. I got a 24" roller from an old defunct typewriter, and it works fine. It doesn't matter where it comes from, but it should probably be made from rubber, since it has a bit of "give" to it. Plastic rollers are usually too stiff to conform the film to the imperfect surface of the board. Place the board on a stiff, flat surface about waist-level, and roll the film out. The purpose of putting it so low is so that you can put your weight into it, in a controlled manner. What you don't want to do is slip, and then wrinkle the film. Go very slowly, giving bubbles and moisture time to work their way out ahead of the roller. When you are done with this, the final step for laminating the film is to bake the board in the oven at 195-200 deg F for 10 minutes. If you see bubbles under the film, then you probably didn't work out enough moisture. For reference, I rarely get them in my boards. Once you get some practice, it only takes about 15-20 minutes to clean and fully laminate a board. After letting the board cool down to room temperature, you are ready to expose the film with your negative artwork. If you choose to use glass to hold your artwork to the board, don't use hobbyist-type glass that they sell in

craft stores. It has UV inhibitors, and multiplies your exposure times. Instead the el-cheapo hardware store glass works the best. But I don't personally use glass, anyway. The reason is that I do fine pitch (5 mil.) traces, and without a vacuum frame, it's darn near impossible to get the glass (and artwork) perfectly flat against the board. So I personally just put the artwork flat on the board, and weight it down at critical points with small coins, screws...whatever's handy...to hold it flush against the board.

A good source of UV (and heat, unfortunately) is a quartz halogen lamp. Tungsten halogen does not work. With a 500W lamp, with the bulb 12" away from the artwork, it takes around 25-27 seconds to fully expose the film. It may vary a bit, but that's a good starting point. Unfortunately, 500 W of heat is seldom good 12" away from plastic film (it wrinkles), so it's necessary to have a type of "shutter", something with which you can expose the film for 2 seconds, then let it cool for a few seconds, for example, before exposing it again. If you have UV flourescent bulbs, then better from a heat standpoint...but I haven't personally used them yet, so I can't give advice on them. But the halogen worklamp is cheap, about $10.00, and they're sold at Home Depot.

So far as developing the film is concerned, first remove the top cover sheet (it's amazing how often I forget to do this). It doesn't develop too well, otherwise. Then add approx. a teaspoon of sodium carbonate to a bowl of warm water to make the developer. Sodium carbonate is an alkaline, and is used to raise the PH of pools. It is cheap, and readily available in pool stores and hardware stores. It is also not caustic to the hands, so feel free to rub the board with your fingertips lightly as it develops, as this will speed up the process. After approx 5 minutes, the board should be developed. If parts of the board that should be bare copper still feel very slick, then you probably have not developed it enough (or have over-exposed it). Feel the resist-covered parts for comparison.

It's getting past my bedtime, here, so I'm going to wrap this up, but I'll finish by saying that when you want to strip the resist from the board after you etch it, merely take the same developer solution, and vigorously boil the board in it for about ten minutes. It will dissolve right off the board. It may help to add a bit more sodium carbonate to the solution, but it will not need much in any case.

Feel free to ask any further questions if needed.

Best Regards,

Sam B.

1862. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 04:42:44 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <8Pdba.16633$UV6.978856@news1.telusplanet.net>
Source record: 37066
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

??? turn down the volume control... connect output to input

that easy

"David Combs" <dkcombs@panix.com> wrote in message
news:b4dp4m$a21$1@panix1.panix.com...
> (Maybe *someone* in all these newsgroups knows how
> to do this -- the resulting info will hopefully
> be useful to readers of each of these many, many
> newsgroups.)
>
> Am listening via net streaming-audio to an important
> meeting 3000 miles away, and need to tape it, if
> possible.
>
> The pc has an earphone/headphones out, which works
> fine, super quality sound coming out.
>
> I also have a sony walkman-like casette-player/recorder,
> and that has a "mic" (microphone, presumably) input
> socket right next to its headphone out.
>
> I want to use that wee machine as my tape-recorder.
>
> (No, don't have the user-manual, which would
> give me the specs for it.)
>
> ---
>
> Surely there's a *huge* voltage mismatch,
> tiny voltage generated by sound-waves hitting
> the mike, vs what it takes to drive the headphones.
>
> To say nothing of the impedances.
>
> ----
>
> QUESTION: is there some, er, "bridge" that
> I can buy that will
> connect the pc's headphone-out to the
> walkman-like recorder's mike-input?
>

> If possible, I vastly prefer to not be forced
> to build such a thing -- especially with
> no more heathkits available!
>
> (I just called the local radio shack, and their
> "expert" said he knew of no such device.)
>
> Thanks so much!
>
> David
>

1863. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 06:15:38 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0303102215.19d0801c@posting.google.com>
Source record: 37067

scharkalvin <wa2mze@bellsouth.net> wrote in message
news:<3E6D2E6D.8060007@bellsouth.net>...
> <....>
> There was also a receiver in popular electronics for 1967 that used a
> 12at7 and a 6ak6. It was
> a band switched sw regen with one triode of the 12at7 used as a reflex
> grounded grid rf stage
> and a grounded cathode af stage, the other triode was a regen detector,
> and the 6ak6 was
> the power output stage. Used mini-inductor coils except for a 71-osc as
> the bcb coil.
> I have this issue of PE someplace, if I can locate it I will scan it and
> post it here.

Yeah, that sounds vaguely familiar. I'm sure the OTs got a kick out
of seeing a reflex regen in 1967!

73,
Mike, KK6GM

1864. Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 10:57:59 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4kfcg$20nbbv$1@ID-150848.news.dfncis.de>
Source record: 37068
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

I'm thinking about trying to get some crystals
custom-made. Has anyone done this and if so, were the
prices sky high etc?

NB: Crossposted.

1865. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 11:03:14 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <b4kfpj$1vg31m$1@ID-140397.news.dfncis.de>
Source record: 37069
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4kfcg$20nbbv$1@ID-150848.news.dfncis.de...
> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?
>
> NB: Crossposted.
>

Prices and quality vary but I generally from QSL in Erith OK.

Typical price is £7.5 / crystal for a 10 day (or so) delivery.

--
73
Brian
G8OSN
www.g8osn.org.uk

Interested in getting a Foundation or Intermediate License? Then visit:
www.amradioinfo.co.uk

1866. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 11:04:45 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b4kfsi$1ui3k7$1@ID-61331.news.dfncis.de>
Source record: 37070
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

No, only of asking for quotations for customised crystals, specifically a 3.558MHz crystal for 80m FISTS calling frequency on my one-valve TX http://www.hanssummers.com/radio/cwtx/index.htm. Nobody call me back from my answering phone messages, and nobody answered my emails. Luckily I found out about crystal penning (http://www.hanssummers.com/radio/penning/index.htm) and lowered a 3.579 crystal to 3.558. Maybe useful to you

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b4kfcg$20nbbv$1@ID-150848.news.dfncis.de...
> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?
>
> NB: Crossposted.
>

1867. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 11:23:00 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4kgu3$20ud7j$1@ID-150848.news.dfncis.de>
Source record: 37071
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Brian Reay" <brian.reay@bigfoot.com> wrote in message
news:b4kfpj$1vg31m$1@ID-140397.news.dfncis.de...

> Prices and quality vary but I generally from QSL in
Erith OK.
>
> Typical price is ï¿½7.5 / crystal for a 10 day (or so)
delivery.
>

Thanks.

I just made an enquiry to Euroquarz. Possibly they may
be dearer, don't know.

I don't even know how many I'll need for a filiter.
I'll be posting a question on filters in a minute.

Rich.

1868. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 11:24:16 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4kgu4$20ud7j$2@ID-150848.news.dfncis.de>
Source record: 37072
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in
message news:b4kfsi$1ui3k7$1@ID-61331.news.dfncis.de...
>
> No, only of asking for quotations for customised
crystals, specifically a
> 3.558MHz crystal for 80m FISTS calling frequency on
my one-valve TX
> http://www.hanssummers.com/radio/cwtx/index.htm.
Nobody call me back from my
> answering phone messages, and nobody answered my
emails. Luckily I found out
> about crystal penning
(http://www.hanssummers.com/radio/penning/index.htm)
> and lowered a 3.579 crystal to 3.558. Maybe useful to
you

Hans

Very interesting. A definite possibility.

1869. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 11:46:58 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b4kibn$1v5o3t$1@ID-61331.news.dfncis.de>
Source record: 37073
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4kgu4$20ud7j$2@ID-150848.news.dfncis.de...
>
> "Hans Summers" <Hans.Summers@Tudor.Com> wrote in
> message news:b4kfsi$1ui3k7$1@ID-61331.news.dfncis.de...
> >
> > No, only of asking for quotations for customised
> crystals, specifically a
> > 3.558MHz crystal for 80m FISTS calling frequency on
> my one-valve TX
> > http://www.hanssummers.com/radio/cwtx/index.htm.
> Nobody call me back from my
> > answering phone messages, and nobody answered my
> emails. Luckily I found out
> > about crystal penning
> (http://www.hanssummers.com/radio/penning/index.htm)
> > and lowered a 3.579 crystal to 3.558. Maybe useful to
> you
>
> Hans
>
> Very interesting. A definite possibility.

Forgot to say Richard, BE CAREFUL OF YOUR FINGERS. Those crystal cases are sharp when you start cutting them off. Tests showed blood was not as good at lowering the frequency as ink.

>

1870. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 12:10:34 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <xCednXz_w4qmT_CjXTWcqA@comcast.com>
Source record: 37074
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

No personal experience. But I read in QRP Homebrewer
http://www.njqrp.org/data/qrp_homebrewer.html
that the cheapest way to build a filter is to buy stock crystals for around
a dollar apiece and sort them for characteristics.

Of course, you are severely limited regarding nominal frequency.

Tom

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4kfcg$20nbbv$1@ID-150848.news.dfncis.de...
> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?
>
> NB: Crossposted.
>

1871. fa:4x 5691 Red, MP 6jb6, Manuals, Dow Key

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 14:07:27 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <z4mba.233$S%3.17963@bgtnsc04-news.ops.worldnet.att.net>
Source record: 37075

On ebay now:

DOW COAXIAL KEY-220vdc
MP 6JB6's
4 x 5691 Red Base
Manuals: TT, Drake, Ameriton, Heath, Collins..mostly original

search under seller: heytubeguy

73 Joe

1872. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 15:33:12 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e6d2416$0$19704@echo-01.iinet.net.au>
Source record: 37058

Chris
Some ideas
The reset pin should be low for 10 master clock cycles.
I think your suspicions are right about IOUD. From memory I think you should clock this at the end of the 6 byte transfer, not with each byte.
Also, the default for the DAC multiplier is zero - you will have to set this up. See

http://members.iinet.net.au/~richardh/Direct%20Digital%20Synthesizer%20using%20the%20AD9854%20quadrature%20DDS.htm

for some code that works in serial mode

Richard

chrisdot muriel <muriel@analogdot.com> wrote in message news:mm5q6vofttpojmjbmcste3kfbe125lg4qv@4ax.com...
> On Mon, 10 Mar 2003 22:42:36 +0200, "Jan Wagner" <jwagner@cc.hut.fi>
> wrote:
>
> >Hi,
> >
> >surprisingly, I've managed to get the AD9854 to behave without much
> >trouble, wow. I'm running it in parallel mode, update clock switched to
> >externally controlled, and PLL turned off for now.
> >
> >Ok, maybe less suprising, there's a "little" problem - there isn't any
> >AC output on the I1 I1B I2 I2B pins, just some very boring DC levels.
> >The AD9854 should have some data loaded into the frequency 1 register,
> >but this just seems to kick the DC levels around, and still no sine
> >output.
> >
> >Maybe some of the AD9854 experts here could help me and suggest where to
> >check for possible errors? I've checked almost everything and everything
> >_seems_ ok but it still refuses to work... :-(
>
> > <snip>
> >Something must be slightly flawed here, but I can't find it... Any
> >ideas?
> >
> >Help and comments would be highly welcome!
> >
> >many thanks!
> > - Jan
>

> Just something quick to note, don't know if it's the problem.
> The AD9854 has a mulitplier in front of
> the DAC for which its default multiplier value is zero.
> Therefore, you'll get DC at the output of the DDS until the multiplier
> is bypassed or its multiplier value is raised.
>
> Hope this might be the problem.
>
> Chris Muriel, G3ZDM, Manchester, UK

1873. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 16:38:26 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18d7b0e045d1c1029897c8@192.168.42.131>
Source record: 37076

In article <b4kfcg$20nbbv$1@ID-150848.news.dfncis.de>,
nearlynews_email@ntlworld.com says...

> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?

Depends on which radio, or what application, you need them for,
plus a whole host of other factors (holder type, accuracy, etc.) I really
can't give a good answer due to the lack of information from your end.

I will say this much; I've ordered crystals, and recrystalled
channel elements, for Motorola radios from International Crystal in
Oklahoma. Never had any problems with their stuff, and their service has
always been top-notch.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1874. Re: WTB: KIM-1 Kimsi Motherboard (S-100)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 16:55:19 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <135s6vsmjjrqk5q3i1rdff6v2bnk7fgh01@4ax.com>
Source record: 37077
Cross-posted to: alt.ham-radio.marketplace,adiaz224@earthlink.net,rec.radio.amateur.homebrew,rec.radio.swap

On Mon, 10 Mar 2003 01:43:50 GMT, Orval Chadsey <n6ozi@earthlink.net>
wrote:

>Alan wrote:
>> I'm looking for an S-100 Kimsi Motherboard that enables a KIM-1 to be
>> expanded using S-100 boards. Please email me directly if you have one or
>> something similar. Thanks.
>> Alan
>>
>>
>
>
>No, but I do have a KIM-1, complete with all documentation in the
>original box, plus 4K of 21L02 chips. Interested?

We used to use a KIM-1 that was much like the Motorola trainers. It
was just a motherboard with a numeric keypad that let us enter the
programs in Hex. As I recall the ones we used were before the S-100
buss came out...Then again that was over 20 years ago.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Orval N6OZI
>San Francisco, CA USA

1875. Re: Power Supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 18:10:43 UTC
From: Karthikayan Balakrishnan <lovedale27@hotmail_NOSPAM.com>
Message-ID: <HBLJsr.L0K@sysadm.physics.uiowa.edu>
Source record: 37078

Ted wrote:

> Look here ! http://www.antennex.com/preview/archive3/powers.htm for a
> switched supply
>
> Ted in Atlanta KD4EE

Thanks a lot, Ted. Looks like a brilliant web-site.

1876. Anyone using C-64, VIC-20, CoCo, Jaguar, Apple II? New ConTiki OS interesting.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 19:00:39 UTC
From: "Please invert everything left of the @ to reply" <6212hgk@newsguy.com>
Message-ID: <cfcs6v8fnhiktksl09tpbbtn940cukfsvc@4ax.com>
Source record: 37079
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

http://dunkels.com/adam/contiki/faq.html
--
Nobody but a fool goes into a federal counterrorism operation without duct tape - Richard Preston, THE COBRA EVENT.

1877. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 19:16:33 UTC
From: cytan@fnal.gov
Message-ID: <b4lcmh$2u4$2@info4.fnal.gov>
Source record: 37080
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

In message <b4kfcg$20nbbv$1@ID-150848.news.dfncis.de> - "Richard"
<nearlynews_email@ntlworld.com> writes:
:>
:>I'm thinking about trying to get some crystals
:>custom-made. Has anyone done this and if so, were the
:>prices sky high etc?
:>
:>NB: Crossposted.
:>

It's really surprisingly cheap (i.e. not an arm or a leg)
See http://www.icmfg.com/buildcrystal.html

Price ranges from 1 off quantities of $16 to $20. I just bought a $100
worth of custom crystals from them. No hassles whatsoever.

Cheng-Yang Tan

1878. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 19:30:45 UTC
From: nordland37@hotmail.com
Message-ID: <3e6e376a.5912654@news.freeserve.net>
Source record: 37083
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On Tue, 11 Mar 2003 11:46:58 -0000, "Hans Summers" <Hans.Summers@Tudor.Com>
wrote:

>Forgot to say Richard, BE CAREFUL OF YOUR FINGERS. Those crystal cases are
>sharp when you start cutting them off. Tests showed blood was not as good at
>lowering the frequency as ink.

Blood or ink, surely that won't be very stable
for very long (?)

--

__
\/ o\ Posted by J.
/__/ West Bank
Tweeksbury on Severn

1879. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 19:55:12 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <b4lev0$5c3$1@freenet9.carleton.ca>
Source record: 37082

"Richard" (nearlynews_email@ntlworld.com) writes:
> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?

I just took delivery of qty 15 8.8125 MHz xtals produced by
West Crystal in Kelowna, BC, for some MMDS converters I bought
for AO-40 reception.

$10.15 Cdn/each, and they did a great job of matching all
the parameters like capacitance and temperature co.

Their overtones are a bit more pricey than fundamental cuts, tho.
--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

1880. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 20:00:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4lf66$20pn06$1@ID-150848.news.dfncis.de>
Source record: 37081
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Cheng-Yang Tan" <cytan@fnal.gov> wrote in message
news:b4lcmh$2u4$2@info4.fnal.gov...

> It's really surprisingly cheap (i.e. not an arm or a
leg)
> See http://www.icmfg.com/buildcrystal.html
>
> Price ranges from 1 off quantities of $16 to $20. I
just bought a $100
> worth of custom crystals from them. No hassles
whatsoever.
>
> Cheng-Yang Tan

Cheng

Yes, not that bad. I guess the cost mounts up if you
need several crystals though.

I got the following quote from a UK supplier (me being
in UK).

"5.172400MHz HC49/20/30/10/30pF
10 pieces: UKP 5.72 each
50 pieces: UKP 4.80 each
Delivery 15~20 working days following receipt of
order."

That means a 5 pole filter would cost me anout ï¿½28.60
in xtals. I suppose an equivalent commercial filter
would cost more.

1881. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 21:01:10 UTC
From: mzenier@eskimo.com
Message-ID: <b4m2rs$581$1@eskinews.eskimo.com>
Source record: 37095
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

In article <b4dp4m$a21$1@panix1.panix.com>,
David Combs <dkcombs@panix.com> wrote:
>(Maybe *someone* in all these newsgroups knows how
>to do this -- the resulting info will hopefully
>be useful to readers of each of these many, many
>newsgroups.)
>
>Am listening via net streaming-audio to an important
>meeting 3000 miles away, and need to tape it, if
>possible.
>
>The pc has an earphone/headphones out, which works
>fine, super quality sound coming out.
>
>I also have a sony walkman-like casette-player/recorder,
>and that has a "mic" (microphone, presumably) input
>socket right next to its headphone out.
>
>I want to use that wee machine as my tape-recorder.
>
>(No, don't have the user-manual, which would
>give me the specs for it.)

Here's how I did it, the line out from the computer to a 25 year old
Panasonic "shoebox" cassette recorder's microphone input.

```
+---------
| mic in
Left --/\/\/\----+ .01 uF V
Right --/\/\/\----+-----||-------/\/\/\--+----
56k ohms (both) 10k ohms |
gnd |
----------------------------------------+
```

The very small capacitor value is to compensate for the huge bass boost on
the input. Given the age of the recorder, I assume that, although it has
a built in electret mic, the external input was for a dynamic microphone.

Mark Zenier mzenier@eskimo.com Washington State resident

1882. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 21:38:56 UTC
From: Eric Ferguson <GEFERG@prodigy.net>
Message-ID: <QHsba.469$2m4.434@newssvr16.news.prodigy.com>
Source record: 37084

I just came across an old "Rat Shack" Science Fair project. It's a "Three Transistor Short Wave Radio". Tells you how to wind the coil(s), how to hook it up to an amplifier, put up an antenna. It has regeneration for the SSB/CW stations. By winding different coils,it'll tune 4.5-7, 6-10, 9-14, 13-20, 19-28, and 26-50 Mhz. Whole thing is 6 pages. If you're interested, let me know and I can xerox the whole thing. I have no access to a scanner so can't send it email, sorry! Only hard part is the 365pf capacitor. Eric KA6USJ

1883. Is this the place?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 22:05:23 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4lmfr$21gsr3$1@ID-150848.news.dfncis.de>
Source record: 37085

I've posted sometimes my radio related posts to
sci.electronics.design. But, I suppose subscribers
here would perhaps be more likely be able to answer my
radio-related questions. Might even be some radio
professionals here I'd imagine. So, this the best place
for technical questions about radio?

1884. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 22:18:47 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b4ln7a$pl5$1@nyytiset.pp.htv.fi>
Source record: 37086

"Richard Hosking" <richardh@iinet.net.au> schrieb im Newsbeitrag
news:3e6d2416$0$19704@echo-01.iinet.net.au...
> Chris
> Some ideas
> The reset pin should be low for 10 master clock cycles.
> I think your suspicions are right about IOUD. From memory I think you
should
> clock this at the end of the 6 byte transfer, not with each byte.
> Also, the default for the DAC multiplier is zero - you will have to
set this
> up. See
>
>
http://members.iinet.net.au/~richardh/Direct%20Digital%20Synthesizer%20u
sing
> %20the%20AD9854%20quadrature%20DDS.htm
>
> for some code that works in serial mode

Thanks to both for the replies!

I indeed had the multiplier not powered down / bypassed. Now I turned it off, and even loaded 0xFF's into both multipliers and freq tuning words (like in your source code too). Also tried pulsing the update clock only once, after all freq & multiplier data was in the buffer memory. Tried "digital powerdown" both in on and off. But the chip still doesn't give out more than low-level DC... :-(

Ok then I tried to read back the written and "transaction committed" register data. The control register stuff I read back corresponds precisely to what was written into the registers. Fine till now. But all the freq words and multipliers which are read back are zero!
Does that sound familiar? Any ideas? Are these registers not supposed to be read back?

Btw, Richard, I think there's an error in your DDS source code (at least in the one on your site):

```
ldi temp_1,0b00000001 ; QDAC source internal,mode 0 (single tone)
; freq update external
rcall DATA2DDS
```

The AD9854 datasheet says the last bit should be low/0 for external, and high/1 for internal update clock generation (page 21, datasheet revision B). So you should be writing an 0x00 to use the external clock.

sigh now I'm off to check the PCB board for errors, for the umpteenth time. Maybe the AD9854 is half-dead...

I'd still be grateful for comments on what could be going wrong here...

thanks,
- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

1885. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 22:46:45 UTC
From: Blood <junkmail@spanner-in-works.com>
Message-ID: <3E6E6755.5010808@spanner-in-works.com>
Source record: 37087
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Quarts Lab Marketing.. I use em all the time, a Pair of Xtals custom made for 23.xxx MHz came in at 14 quid.. All in..

I think the website is www.quartslabs.co.uk.. but dont quote me on that!

Richard wrote:
> I'm thinking about trying to get some crystals
> custom-made. Has anyone done this and if so, were the
> prices sky high etc?
>
> NB: Crossposted.
>

1886. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 23:09:06 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e6e6c86$0$134$edfadb0f@dtext02.news.tele.dk>
Source record: 37088

Hello Eric

> send it email, sorry! Only hard part is the 365pf capacitor. Eric KA6USJ

No problem in that, you can get brand new ones at, both single and dual gang.

http://www.midnightscience.com/

Regards Max

1887. Re: Is this the place?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 23:10:02 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e6e6cbe$0$120$edfadb0f@dtext02.news.tele.dk>
Source record: 37089

Hello Richard

> I've posted sometimes my radio related posts to
> sci.electronics.design. But, I suppose subscribers
> here would perhaps be more likely be able to answer my
> radio-related questions. Might even be some radio
> professionals here I'd imagine. So, this the best place
> for technical questions about radio?

Try us :)

Regards Max

1888. Re: Is this the place?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 23:19:18 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4lqu7$20dvd3$1@ID-150848.news.dfncis.de>
Source record: 37090

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e6e6cbe$0$120$edfadb0f@dtext02.news.tele.dk...
> Hello Richard
>
> > I've posted sometimes my radio related posts to
> > sci.electronics.design. But, I suppose subscribers
> > here would perhaps be more likely be able to answer
my
> > radio-related questions. Might even be some radio
> > professionals here I'd imagine. So, this the best
place
> > for technical questions about radio?
>
> Try us :)
>
> Regards Max

Well I have been and it's been okay. Today the subject
was crystal filter design and for some reason thought
sci.electronics.design was the place. But then I
thought, some folks at rec.radio.amateur.homebrew would
probably know all about design and I need not bother
with sci.electronics.design.

Rich.

1889. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-11 23:55:47 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <EBC87CF34B41C2D2.4B4E0B46BB7E60E6.407ABBF0ED487E76@lp.airnews.net>
Source record: 37091
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4lf66$20pn06$1@ID-150848.news.dfncis.de...
>
> "Cheng-Yang Tan" <cytan@fnal.gov> wrote in message
> news:b4lcmh$2u4$2@info4.fnal.gov...
>
> > It's really surprisingly cheap (i.e. not an arm or a
> leg)
> > See http://www.icmfg.com/buildcrystal.html
> >
> > Price ranges from 1 off quantities of $16 to $20. I
> just bought a $100
> > worth of custom crystals from them. No hassles
> whatsoever.
> >
> > Cheng-Yang Tan
>
> Cheng
>
> Yes, not that bad. I guess the cost mounts up if you
> need several crystals though.
>
> I got the following quote from a UK supplier (me being
> in UK).
>
> "5.172400MHz HC49/20/30/10/30pF
> 10 pieces: UKP 5.72 each
> 50 pieces: UKP 4.80 each
> Delivery 15~20 working days following receipt of
> order."
>
> That means a 5 pole filter would cost me anout ?28.60
> in xtals. I suppose an equivalent commercial filter
> would cost more.

The problem is that you are specifying a weird frequency. If you could move your IF to 4 MHz, you can use cheap surplus microprocessor crystals, which typically run US$1 or so. You have to match your crystals for frequency (obviously), and you may have to play some impedance-matching games.

1890. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 00:31:00 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <6gvs6vgrfkh7v521m7t5ssctopoqdv2sho@4ax.com>
Source record: 37092
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On 12 Mar 2003 00:21:35 GMT, "MattD.." <mattd145@msn.com> wrote:

>Uttered J. with scant regard for uk.radio.amateur:
>
>> Blood or ink, surely that won't be very stable
>> for very long (?)
>>
>
>Didn't we use pencil lead in the dim and distant past to alter crystals?
>ISTR someone explaining the theory to me in my pre-licensed days when I was
>really enthusiastic :o)

Gee, I date from the "remove crystal from holder and lap with Boraxo
on a glass plate" era ;-)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

1891. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 01:16:48 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <hf2t6vsl7484eo6dfip83orhd683fcstij@4ax.com>
Source record: 37093
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On 12 Mar 2003 00:49:01 GMT, "MattD.." <mattd145@msn.com> wrote:

>Uttered Jim Thompson with scant regard for uk.radio.amateur:
>
>> Gee, I date from the "remove crystal from holder and lap with Boraxo
>> on a glass plate" era ;-)
>
>But didn't that have the opposite effect? Raised the frequency, whereas
>adding a pencil mark would lower it, I mean.

You're correct, I was late to the thread. But I still can't remember
that crystal case style number... remove a few screws and there you
go, blank in your hand ;-)

>
>BTW, some useful PSpice stuff on your web site, Jim. Thanks!

You are quite welcome! Enjoy!

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

1892. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 01:26:11 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4m2bj$5cm$1@freenet9.carleton.ca>
Source record: 37094
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Jim Thompson (Jim-T@analog_innovations.com) writes:
> On 12 Mar 2003 00:21:35 GMT, "MattD.." <mattd145@msn.com> wrote:
>
>>Uttered J. with scant regard for uk.radio.amateur:
>>
>>> Blood or ink, surely that won't be very stable
>>> for very long (?)
>>>
>>
>>Didn't we use pencil lead in the dim and distant past to alter crystals?
>>ISTR someone explaining the theory to me in my pre-licensed days when I was
>>really enthusiastic :o)
>
> Gee, I date from the "remove crystal from holder and lap with Boraxo
> on a glass plate" era ;-)
>
> ...Jim Thompson

The pencil lead is for when you grind a bit too far, and you need
to put a bit back. Or if your crystal is a tad too high in frequency,
and you need to go lower. If you added too much lead, it would affect
the crystal in more than frequency. Of course, you could always
erase it, unlike when doing actual grinding.

People don't think about grinding much since crystals are in sealed
mounts nowadays. You'd hear about grinding crystals far more often
back in the days of FT-243 crystal holders, where you could easily unscrew
the cover if you needed to do something to the quartz.

Though, thirty to thirty-five years ago, a guy named Larry Walrod in
BC wrote a number of articles for CQ magazine, where he was grinding
HC-6 cased crystals. He gave details about opening them (using a heatsink)
and he claimed he had no problems once everything was back in place. He
even had a jig so he could test the crystals without actually
soldering the cover back in place.

He was doing intriguing things with those ground crystals. Direct
conversion SSB transceivers, with the crystals on the signal frequency.

Michael VE2BVW

1893. Re: Is this the place?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 01:41:25 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb6t423.ggt.nobody@animas.frontier.net>
Source record: 37096

On Tue, 11 Mar 2003 22:05:23 -0000, Richard hath writ:

> ..... So, this the best place
> for technical questions about radio?

You betcha!

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1894. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 01:46:28 UTC
From: novatech@eskimo.com
Message-ID: <b4m3hk$5fl$1@eskinews.eskimo.com>
Source record: 36997
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"MattD.." <mattd145@msn.com> writes:

>MattD..

>Shameless plug:
>http://www.mattsnetwork.co.uk

I think these guys will still make to order small quantities of crystals:

http://www.icmfg.com/

Steve
--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

1895. shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:01:05 UTC
From: Vic <bogus@nospam.com>
Message-ID: <Oqwba.5843$Ja6.5304@fe06.atl2.webusenet.com>
Source record: 36998

If there is a better (or more appropriate) NG to post these questions please let me know.

After 8 years in the hobby I've finally decided to address GROUNDING. About all I know is equipment should be grounded and
everything in the house (including house electrical) should have a COMMON ground. Well, the shack is at the opposite end of the
house electrical ground. To couple the house electrical ground and a shack ground rod would require a trench approx. 80' long ...
it's not going to happen soon so I'd like to address just grounding what I can for now.

I am wondering exactly what equipment SHOULD be grounded
Equipment is as follows:
(1) HF transceiver(100w)
(1) HF antenna tuner
(2) VHF-UHF transceivers
(1) TNC
(1) 12v pwr supply (astron 35M)
(1) RigRunner power distribution block
(1) tabletop scanner
(1) PC used for digital mode operation

All above items (except PC) are powered from the one Astron pwr. supply
All radios above have different antennas
The PC and Astron are on different house AC circuits
(you may not need all this inf., please disregard what is not necessary)
If there is a web site with the appropriate information the link would be appreciated!

I would like to know what equipment should be grounded, ground wire sizes (for example; is 18 gage wire on the HF rig enough; is
18ga. sufficient for the TNC if the TNC should be grounded etc?

Would it be OK to have a 8' ground rod outside, coupled to the shack ground, even though it is NOT coupled to the house electrical
ground? Is 8' enough ... I can get a 10-12' rod if necessary? Is copper clad iron OK or should it be pure copper rod?

Is it OK to couple the common ground in the shack to the house wiring AC ground?

Also, I have heard certain metals are chemically reactive when touching (e.g. certain alum & copper)
but those are the only ones I'm familiar with. Is stainless and or steel (iron) ok to use with copper?

Lot's of questions I know, but any helpful information would be appreciated!

Vic / KE4QJK

1896. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:21:39 UTC
From: k9sqg@aol.com
Message-ID: <20030311212139.15563.00000117@mb-cm.aol.com>
Source record: 36999

A valid email will yield a valid reply...

1897. Question about YIG oscillators - care and feeding

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:22:31 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0303111822.112b811d@posting.google.com>
Source record: 37000

Hello all,

I have an Avantek Y085-2217 2-8GHz osc. and would appreciate some help with some questions.

1) Main Power -5v, +15v - do these have to be sequenced I.E. -ve power before +ve on power up, remove +ve, remove -ve on power down.

2) HTR - any idea of nominal supply and warm up time ?

3) Tune - +ve or -ve tuning current ? 500mA seems typical. What is the initial freq with no current applied - Low, mid or High Freq ? What happems with -ve current ?

4) FM - Presumably fine tuning on 'Tune' but with lower inductance so higher agility ??

5) RF power level +5 to +15dBm seems typical, is this about right ?

A data sheet would be wonderful.

My direct email is markaren1 at earthlink.<nospam>com remove the <nospam> and replace an at at the at.

Thanks,

Mark.

1898. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:38:09 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933BBD930C496pookster@216.168.3.50>
Source record: 37001

k9sqg@aol.com (K9SQG) wrote in news:20030311212139.15563.00000117@mb-cm.aol.com:

> A valid email will yield a valid reply...
>

---

k9sgg loves spam.

--
Bill, W7TI

1899. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:47:30 UTC
From: Vic <bogus@nospam.com>
Message-ID: <k6xba.7932$Ja6.6172@fe06.atl2.webusenet.com>
Source record: 37002

ke4qjk@qsl.net

"K9SQG" <k9sqg@aol.com> wrote in message
news:20030311212139.15563.00000117@mb-cm.aol.com...
> A valid email will yield a valid reply...

1900. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 02:49:17 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933BBF7637BF0pookster@216.168.3.50>
Source record: 37003

"Vic" <bogus@nospam.com> wrote in news:Oqwba.5843$Ja6.5304
@fe06.atl2.webusenet.com:

> After 8 years in the hobby I've finally decided to address GROUNDING.

There are three reasons to ground:

1. To reduce shock hazard from the AC mains.
2. For transmitting/receiving.
3. For lightning protection.

#1 will be taken care of if you use the now-standard three wire AC plug and your house wiring itself is properly grounded. The length of the ground wires in the house is of little consequence, within reason. All of your equipment which has a metal case or which has metal parts connected to the circuitry (knobs, etc) should be connected together and connected to the "third wire" AC ground.

#2 Should not be done at all, IMO. Your RF energy should not be traveling through dirt. Get it up in the air where it belongs. Good antenna systems do not need "grounds".

#3 Lightning protection. The PolyPhaser web page has a wealth of information, especially this article specific to ham radio:
http://www.polyphaser.com/ppc_PEN1016.asp

Hope that helps. More questions?

--
Bill, W7TI

1901. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 03:07:47 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <nu8t6v410nojd0ft1r4dknt7r4htrb69p2@4ax.com>
Source record: 37004

How did you get your license and operate for eight years without
knowing anything about grounding? Boggles the mind. Anyways, you can
start here: http://www.arrl.org/tis/info/grounding.html

In <Oqwba.5843$Ja6.5304@fe06.atl2.webusenet.com>, "Vic"
<bogus@nospam.com> wrote:

>If there is a better (or more appropriate) NG to post these questions please let me know.
>
>After 8 years in the hobby I've finally decided to address GROUNDING. About all I know is
equipment should be grounded and
>everything in the house (including house electrical) should have a COMMON ground. Well,
the shack is at the opposite end of the
>house electrical ground. To couple the house electrical ground and a shack ground rod
would require a trench approx. 80' long ...
>it's not going to happen soon so I'd like to address just grounding what I can for now.
>
>I am wondering exactly what equipment SHOULD be grounded
>Equipment is as follows:
>(1) HF transceiver(100w)
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>(2) VHF-UHF transceivers
>(1) TNC
>(1) 12v pwr supply (astron 35M)
>(1) RigRunner power distribution block
>(1) tabletop scanner
>(1) PC used for digital mode operation
>
>All above items (except PC) are powered from the one Astron pwr. supply
>All radios above have different antennas
>The PC and Astron are on different house AC circuits
>(you may not need all this inf., please disregard what is not necessary)
>If there is a web site with the appropriate information the link would be appreciated!
>
>I would like to know what equipment should be grounded, ground wire sizes (for example; is
18 gage wire on the HF rig enough; is
>18ga. sufficient for the TNC if the TNC should be grounded etc?
>
>Would it be OK to have a 8' ground rod outside, coupled to the shack ground, even though
it is NOT coupled to the house electrical
>ground? Is 8' enough ... I can get a 10-12' rod if necessary? Is copper clad iron OK or
should it be pure copper rod?
>
>Is it OK to couple the common ground in the shack to the house wiring AC ground?
>

>Also, I have heard certain metals are chemically reactive when touching (e.g. certain alum & copper)
>but those are the only ones I'm familiar with. Is stainless and or steel (iron) ok to use with copper?
>
>Lot's of questions I know, but any helpful information would be appreciated!
>
>Vic / KE4QJK
>
>
>
>
>
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1902. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 04:14:03 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b4mc6d$a77$1@slb3.atl.mindspring.net>
Source record: 37005
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

When I wanted to build a CW filter, I used 5.000 MHz crystals which are VERY common computer timebase crystals and can be gotten many places at low cost.

The crystal Q was relatively low so I had some insertion loss, but for the price I got a 450 Hz CW filter with about 270 ohms terminating impedance.

So if a particular frequency is necessary, custom crystals might be needed but if you can shift to one of the computer timebase frequencies then the crystals are low cost and easy to get.

Jim Pennell
N6BIU

1903. [FA] microwave goodies - 1.7-2.0GHz VCOs, low price

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 04:46:50 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0303112046.47b1fe61@posting.google.com>
Source record: 37006

VCO 1.7 to 2.0 GHz 10 pcs voltage controlled

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7286&item=2514583499

1904. SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 05:26:18 UTC
From: Dan Stanger <dan.stanger@ieee.org>
Message-ID: <3E6EC4FA.557EC32D@ieee.org>
Source record: 37007

Does anyone have a copy of the paper by Don Norgaard, titled
A Third Method of Generation and Detection of Single-Sideband Signals,
published in the Procedings of the IRE, Dec. 1956?
It describes how to generate ssb with 4 balanced modulators,
but without phase shift networks and filters.
Thank you,
Dan Stanger

1905. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 05:28:33 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4mgi1rbh1@freenet9.carleton.ca>
Source record: 37008
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Jim Pennell" (NoSpam@killspam.com) writes:
> When I wanted to build a CW filter, I used 5.000 MHz crystals which are
> VERY common computer timebase crystals and can be gotten many places at low
> cost.
>
> The crystal Q was relatively low so I had some insertion loss, but for
> the price I got a 450 Hz CW filter with about 270 ohms terminating
> impedance.
>
> So if a particular frequency is necessary, custom crystals might be
> needed but if you can shift to one of the computer timebase frequencies then
> the crystals are low cost and easy to get.
>
>
>
> Jim Pennell
> N6BIU
>
>
I think that's a significant point. Amateur crystal filter building
has pretty much always relied on a source of cheap and available crystals.

Forty to fifty years ago, it was military surplus crystals in FT-243
crystal holders. There was lots of channelized operation in the military,
so one could find plenty of adjacent channel crystals that were space
just right for a filter. The norm was a lattice filter of some sort,
so the crystals needed to be spaced apart. And since you could unscrew
the crystal holder to get at the quartz, you could grind the crystals
if you couldn't get the needed spacing at the desired center frequency.
At first, they'd built them at 455KHz, but then they were in the HF
range, often at that ubiquitous 9MHz.

Yet, the need to grind and/or find closely spaced crystal sets was
always a sore point. Homemade crystal filters seemed to disappear
almost as soon as commercially made HF crystal filters were available.

But then when people started writing about ladder filters, it
restarted homemade crystal filter building. Since the ladder
filters needed crystals on the same frequency, it made getting
crystals easier. Though, the scheme counted on cheap crystals so
you could buy a large quantity, and sort out enough with matching
center frequency and other characteristics that were good.

But in either case, when building it was relatively easy to adapt to available crystal frequencies. If you couldn't get 9MHz crystals, then there were always 8MHz crystals, though of course there were some issues that had to be dealt with, such as getting the right bandwidth at a given center frequency, and troublesome spurs.

Modifying a rig is another matter. You have no choice about the center frequency, since you are trying to fit it into an existing rig. And the chances of getting crystals, especially cheap, at a given IF, go way down.

Having crystals made up may then become the only choice, depending on the specific IF. And the more specific the specs of the needed crystals, the higher the cost. Loosen the specs, and you may need to buy extra crystals to get enough that are suitable. Either way, it's going to more expensive than using available crystals.

Michael VE2BVW

1906. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 05:50:20 UTC
From: averyfineman@aol.com
Message-ID: <20030312005020.22145.00000440@mb-me.aol.com>
Source record: 37009

In article <hf2t6vsl7484eo6dfip83orhd683fcstij@4ax.com>, Jim Thompson
<Jim-T@analog_innovations.com> writes:

>You're correct, I was late to the thread. But I still can't remember
>that crystal case style number... remove a few screws and there you
>go, blank in your hand ;-)

That's probably the old FT-243 crystal holder...plate comes off
the wide side. If the plastic case separates and comes off in
the direction on-line with pins but in opposite direction, it would
be the old FT-241 holder.

About 30+ million quartz crystal units were produced by USA
during a three-year period of WW2, roughly a million a month.
No man-made/-grown quartz then...nearly all raw quartz
imported from Brazil. :-)

Len Anderson
retired (from regular hours) electronic engineer person

1907. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 06:32:28 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4mk9s$3m4$1@freenet9.carleton.ca>
Source record: 37010

Dan Stanger (dan.stanger@ieee.org) writes:
> Does anyone have a copy of the paper by Don Norgaard, titled
> A Third Method of Generation and Detection of Single-Sideband Signals,
> published in the Procedings of the IRE, Dec. 1956?
> It describes how to generate ssb with 4 balanced modulators,
> but without phase shift networks and filters.
> Thank you,
> Dan Stanger
>
I didn't know that he'd written such an article. The scheme
is also known as the Weaver method.

It does use phase shift networks, just not in the signal path.
Split the audio into two mixers. The mixers are fed with
an audio signal (commonly 1800Hz), but the feed to each mixer
is 90 degrees apart. The output of those mixers are fed
to two more mixers; again, their oscillator feed is 90
degrees apart. This second oscillator would be at the
IF frequency, or even the signal frequency. One way
of looking at that first set of mixers, admittedly simplistic,
is that it forms a broadband audio phase shift network. Of
course, it's not so simple because of that carrier right in
the middle of the audio passband.

A limited bibliography on the subject is below. Admittedly limited
to what I've come across, and I think Wireless World
and perhaps QEX have had additional articles on the subject
in recent years.

QST Sept 1957. Howard F. Wright. "The Third Method of SSB".
(This seems to be a popular version of the IRE article, complete
with some excerpts. Note, it says the Dec. 1956 is by D.K. Weaver,
which makes sense since it is called the Weaver method.)

New Sideband Handbook. Published by CQ in 1958. Don Stoner.
Two pages at the end of the phasing chaper cover the Third Method.
A block diagram, and details on a commercial transceiver using
the scheme.

CQ Oct. 1962. An explanation, including a block diagram in
the Sideband column on page 56.

CQ June 1965. Fred Johnson. "The Third Method -- Is it Worthwhile?"
(A more extensive explanation, with the diagram from the IRE
article, it was also in the QST article, that lacks component values.)

The Radio & Electronic Engineer. March 1973.
I've never seen this article, don't even know the magazine, but
apparently there is something about the Third Method, maybe as
a receiver, maybe with AC coupling between the first set of
mixers and the second set.

The fifth edition, 1977, of the RSGB Radio Communication Handbook has
some mention of the scheme. In the receiver section, briefly, and
HF Transmitter chapter. No construction material.

Ham Radio Jan 1978 VK2ZTB "Ssb phasing techniques" This is a review
of various schemes, and memory tells me there is a bit about the
Third method right at the end.

Electronics World + Wireless World April 1993. Nic Hamilton. "SSB: third
method, fourth explanatiion" (An explanation, and a full circuit
in solid state taking advantage of digital circuitry.)

QEX August 1991. Peter Anderson. "A Different Weave of SSB Exciter"
I'd say more of a construction article than explanation, though
it has that, and again making use of digital circuitry.

I guess I should clarify that bit about digital circuitry. No digital
processing is done in either of these articles; the digital is
in the quadrature oscillators, and using CMOS switches for the
mixers. But, I gather some have used the Third Method with
a DSP, and there might perhaps be an article about it.

William Sabin's book about SSB may have something about the
scheme; at least, the Wireless World article references something
in it.

These are the references I have handy. I really get the feeling
I've seen some passing references in magazine articles about direct
conversion receivers.

Doing a websearch is going to turn up some material.

Michael VE2BVW

1908. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:13:00 UTC
From: Trevor Day <Trev@secornwall.removethis.com>
Message-ID: <Zb2lhpGsgwb+EwbA@secornwall.com>
Source record: 37011
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

In message <hf2t6vsl7484eo6dfip83orhd683fcstij@4ax.com>, Jim Thompson
<Jim-T@analog_innovations.com> writes
>On 12 Mar 2003 00:49:01 GMT, "MattD.." <mattd145@msn.com> wrote:
>
>>Uttered Jim Thompson with scant regard for uk.radio.amateur:
>>
>>> Gee, I date from the "remove crystal from holder and lap with Boraxo
>>> on a glass plate" era ;-)
>>
>>But didn't that have the opposite effect? Raised the frequency, whereas
>>adding a pencil mark would lower it, I mean.
>
>You're correct, I was late to the thread. But I still can't remember
>that crystal case style number... remove a few screws and there you
>go, blank in your hand ;-)

ISTR the 10X case Jim, from memory about 1 inch by 1.5 inches and 4
screws with the xtal held by a couple of spring steel plates. There were
(are) others but the 10x seemed the easiest (largest) to work with.

Trev

--
Trevor Day

1909. Re: Anyone using C-64, VIC-20, CoCo, Jaguar, Apple II? New ConTiki OS interesting.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:18:57 UTC
From: "Chip G." <n.1.m.i.e@snet.net>
Message-ID: <120320030518570449%n.1.m.i.e@snet.net>
Source record: 37012
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In article <cfcs6v8fnhiktksl09tpbbtn940cukfsvc@4ax.com>, < @> wrote:

> http://dunkels.com/adam/contiki/faq.html

Very interesting, but what does that have to do with anything but C-64?
Why the other items in the title when they are unrelated?

Thank,

--
--Chip
remove dots in prefix to fix email address

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1910. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:19:16 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Kh2UBGBkmwb+EAqp@ifwtech.co.uk>
Source record: 37013

Frank Gilliland wrote:
>How did you get your license and operate for eight years without
>knowing anything about grounding? Boggles the mind.

Not really - it's in the nature of amateur radio that we pick up knowledge as and when we need it.

Grounding is certainly one of those areas where you can go for years without really having to think about it, if you're lucky - or you can meet big problems as soon as you go on the air.

Also, since "no grounding advice is universal" (ARRL) you're likely to keep on meeting different faces of this problem. After 40 years, I still am.

>Anyways, you can start here:
>http://www.arrl.org/tis/info/grounding.html

Thanks - a very good link.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1911. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:28:04 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4n20p$221j0q$1@ID-150848.news.dfncis.de>
Source record: 37014
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:b4mc6d$a77$1@slb3.atl.mindspring.net...
> When I wanted to build a CW filter, I used 5.000
MHz crystals which are
> VERY common computer timebase crystals and can be
gotten many places at low
> cost.
>
> The crystal Q was relatively low so I had some
insertion loss, but for
> the price I got a 450 Hz CW filter with about 270
ohms terminating
> impedance.
>
> So if a particular frequency is necessary, custom
crystals might be
> needed but if you can shift to one of the computer
timebase frequencies then
> the crystals are low cost and easy to get.

What's tending me to stick to the odd crystal frequency is that if I change RX 1st IF (say to 5Mhz) I have to mess with the TX C.O. and SSB filiter. That has to go to 5Mhz. This because I was wanting one VFO to control both RX and TX. If the TX had more than one mixer in it I probably could just have compensated by altering a xtal in a heterodyne ocs, but I cannot do that. Other way is to use a sepearate VFO for RX and TX. That means building 2 VFOs.

In that case, it might be better to change the C. O. frequency and SSB filiter in the TX. And make TX crystal filter with cheap 5 Mhz xtals. But then again if the SSB filter was in 5000 Khz, C.O.would have to be on about 4998.5 Khz. Well here we go again, an odd frequency. But could I pull a 5Khz xtal to 4998.4 Khz? That way I could use 5000 Khz xtals throughout. In both RX and Tx.

But, there is a problem with the RX. If my CW/SSB filtering takes place at the 1st IF, I need to build a 5000Khz SSB filter. Easy peasy. But for CW I'd have to build a xtal filter centered on 4998.5 Khz. How do I do that with 5 Mhx xtals?

1912. Re: Is this the place?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:37:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4n2j4$21ile4$1@ID-150848.news.dfncis.de>
Source record: 37015

"Richard" <nearlynews_email@ntlworld.com> wrote in
message
news:b4lqu7$20dvd3$1@ID-150848.news.dfncis.de...
>
> "Max" <Max_Jens@post9.tele.dk> wrote in message
> news:3e6e6cbe$0$120$edfadb0f@dtext02.news.tele.dk...

>
> Well I have been and it's been okay. Today the
subject
> was crystal filter design and for some reason thought
> sci.electronics.design was the place. But then I
> thought, some folks at rec.radio.amateur.homebrew
would
> probably know all about design and I need not bother
> with sci.electronics.design.
>
> Rich.

Thing is, recently I crossposted to three groups. I
bet normally I need only post to rec.amateur.homebrew.
(Although some folks on uk.radio.amateur and
sci.electronics.design seem to know something about
radio) :c)

1913. Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:43:11 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4n2sp$2129sc$1@ID-150848.news.dfncis.de>
Source record: 37016

Following was written (over at sci.electronics.design)

Plan 2 is the better one, isn't it?

Hi

Your post has got me thinking about changing my design plans.

Perhaps I ought to explain first what I was going to do, but may abandon for new plan # 2.

The RX is double conversion, quite old (mid 1960's) . It's meant to be for CW and SSB, but really everything is geared towards SSB. Selectivity is accomplished at 455 Khz where the bandwidth is about 3 Khz. I am wanting to modify it in various ways, to have a CW filter and a narrower SSB filter at 455 Khz, and to arrange for better VFO and digital readout. VFO to control Rx and seperate TX. I want VFO to read correct frequency going from CW to SSB and vica-versa.

The 1st IF is notionally centered on 5173.9 Khz. However the carrier of course is not here but about 1.5 Khz away at 5172.4 Khz. The 1st IF is nothing but two LC resonant citcuits, so passband is wide. Thus selectivity is acheived at 455 Khz. However it's so wide at around 5173.9 Khz that you get cross mod in the second mixer. Solution: place a crystal filter in the 1st IF to stop the cross mod. But of course, you could not put a 3 Khz wide filter here centered in 5173.9 Khz, because (unless you are willing to alter your VFO and thus alter your frequency readout) a CW signal on 5172.4 Khz is out of the passband. So is the SSB carrier, but of course that is okay for SSB. So, what you do is put in say a 6Khz filiter and that way you have no problem attenuation the CW signal. You then put seperate CW and SSB 455 Khz filters in and things are fine, remembering to put in another xtal in the xtal osc for the 2nd IF so that you can centre a CW signal at 455 Khz, otherewise it would land at 456.5 Khz.

This would work, but you got me thinking about something possibly better. If you can get the

crystals, there is no reason why the CW and SSB filtering should take place at the 1st IF. What you do is construct two filters, a CW filter centered on 5172.4 Khz and the SSB filter centered on 5173.9 Khz. Changing from CW to SSB requires no change of VFO. If you kept the old 455 Khz filter in you would have to put in another xtal in the xtal osc for the 2nd IF to get the CW signal away from the skirt, but if you took that filter out and the 455 Khz IF was pretty broad, then you could probably get away with not having another crystal for CW working.

Plan # 2 I think is the best one. What say? But it is dependent on building crystal filters at these odd frequencies. Which has to be, unless I start messing with the TX crystal filter and C. O.

1914. Re: Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 10:51:34 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4n3cd$22ei53$1@ID-150848.news.dfncis.de>
Source record: 37017

"Richard" <nearlynews_email@ntlworld.com> wrote in
message
news:b4n2sp$2129sc$1@ID-150848.news.dfncis.de...

>
> Plan # 2 I think is the best one. What say? But it
is
> dependent on building crystal filters at these odd
> frequencies. Which has to be, unless I start
messing
> with the TX crystal filter and C. O.

Actually, if I was prepared the change TX C. O, I'd
have to have the C. O. at 4998.5 Khz and I'd make a
5.000 Khz SSB filiter. Could I pull a 5 Mhz xtal to
4998.5 Khz?

On the RX side I'd make a 5000 Khz SSB filiter, but the
CW filter would have to be 4998.5 Khz. Could the CW
filter be made with 5 Mhz xtals?

(All because I was wanting one VFO to control both TX
and RX).

1915. Re: Question about YIG oscillators - care and feeding

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 11:16:41 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <mo5u6vkbpgntv0kgcqslmogca9d6qsok40@4ax.com>
Source record: 37018

Comments mixed in below...

On 11 Mar 2003 18:22:31 -0800, markaren10@yahoo.com (Mark Aren)
wrote:

>Hello all,
>
>I have an Avantek Y085-2217 2-8GHz osc. and would appreciate some help
>with some questions.

I don't have info on that P/N but have some info on other Avantek
YIG oscillators that are probably similar.

>
>1) Main Power -5v, +15v - do these have to be sequenced I.E. -ve power
>before +ve on power up, remove +ve, remove -ve on power down.

As far as I know it doesn't matter. From specs on units I have its
probably about 200-350 mA on +15 V and 60 mA on -5 V.

>
>2) HTR - any idea of nominal supply and warm up time ?

Don't know the time, but you can use them without connecting the
HTR. Should be connected for stability, though. Probably wants 20 to
28 VDC at about 1.5 to 2 Watts. I think it should stabalize pretty
well in a few minutes.

>
>3) Tune - +ve or -ve tuning current ? 500mA seems typical. What is the
>initial freq with no current applied - Low, mid or High Freq ? What
>happems with -ve current ?

Its a coil. Current through it determines output freq. The similar
units are 20 MHz/mA so 2-8 GHz would be about 100-400 mA. If current
is too low or too high it won't oscillate. Spec may be 10 ohms in
series with 95 mH.

>
>4) FM - Presumably fine tuning on 'Tune' but with lower inductance so
>higher agility ??

Usually used for phase locking or FM modulation. You can use without
this. Specs for units I have are all 310 kHz/mA. In addition to
finer control, you can also control this coil with a higher
frequency modulation than Tune. Spec may be 1 ohm in series with 1.7
uH.

>
>5) RF power level +5 to +15dBm seems typical, is this about right ?

Three units I have specs for with 2-8 GHz range have nominal outputs
of 14.8, 20 and 23 dBm so its probably one of those. Output may vary
by 5 or more dB across the frequency range.
>
>A data sheet would be wonderful.

I gave you most of the important stuff if the units are similar. You
should be able to hook up DC voltages and put an adjustable current
source across the tune coil to see if it works. Should be safe to
try and you can then tell if the tuning currents match by checking
output power/freq.

-Rex, KK6MK

1916. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 13:23:11 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b4ncdg$6co$1@nyytiset.pp.htv.fi>
Source record: 37019

<snip>
> Ok then I tried to read back the written and "transaction committed"
> register data. The control register stuff I read back corresponds
> precisely to what was written into the registers. Fine till now. But all
> the freq words and multipliers which are read back are zero!
> Does that sound familiar? Any ideas? Are these registers not supposed to
> be read back?

Miraculously solved!

a) weak solder paste joints on both I/I2 pins. Exactly _these two_ out of
all 80 possible pins - maybe I should try the lottery this week! ;-)) The
pins conduct when the scopemeter probe is pressed down, but are open-circuit
otherwise, i.e. very nice to spot that...

b) register read-out started working all by itself overnight. Maybe it was
helped by shaking the 12V battery, or a neutrino striking at the right spot,
or something similarly likely and probable.

But, finally, the filters now put out two wonderfully crisp sine waves! 8-)

thanks,

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

1917. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 13:42:01 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <JOGba.52032$F1.2038@sccrnsc04>
Source record: 37021
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard, send me a personal e-mail.

W4ZCB

1918. 10ghz gun oscillator question..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 14:39:27 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047480655.74793@auth2.dns.griffin.net.uk>
Source record: 37022

hello...

can anyone tell me what polarization ,vertical or horizontal) when looking into a typical 10ghz gun oscillator unit (ie sofan doppler unit,) with the gun diode vertical, connections on top, longest side of waveguide horizontal I will be getting???

Also on your typical lnb ie amstrad blue cap vertical or horizontal polarization when supplying 13V NOT 18v to the LNB...

modifying blue cap to transmit and i need to know which fet to install in output stage h or v..above questions will answer ..using same + sat can to rx.comparing against dopplar unit for range and drift.

thanks simon G0zen (dont you find the more one learns the more one discovers that you know nothing.)learning about microwaves the hard way...

1919. Re: Question about YIG oscillators - care and feeding

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 14:57:38 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0303120657.7cc37e22@posting.google.com>
Source record: 37023

Hi Rex,

Thankyou.

Main tuning - is this intended to work with bipolar current (+- 200mA)
or unipolar ? 0..200mA ? Looks like it's unipolar from the way you
phrase your reply.

Regards,

Mark.

Rex <notreally@hotmail.invalid> wrote in message
news:<mo5u6vkbpgntv0kgcqslmogca9d6qsok40@4ax.com>...
> Comments mixed in below...
>
> On 11 Mar 2003 18:22:31 -0800, markaren10@yahoo.com (Mark Aren)
> wrote:
>
> >Hello all,
> >
> >I have an Avantek Y085-2217 2-8GHz osc. and would appreciate some help
> >with some questions.
>
> I don't have info on that P/N but have some info on other Avantek
> YIG oscillators that are probably similar.
>
> >
> >1) Main Power -5v, +15v - do these have to be sequenced I.E. -ve power
> >before +ve on power up, remove +ve, remove -ve on power down.
>
> As far as I know it doesn't matter. From specs on units I have its
> probably about 200-350 mA on +15 V and 60 mA on -5 V.
>
> >
> >2) HTR - any idea of nominal supply and warm up time ?
>
> Don't know the time, but you can use them without connecting the
> HTR. Should be connected for stability, though. Probably wants 20 to
> 28 VDC at about 1.5 to 2 Watts. I think it should stabalize pretty
> well in a few minutes.
>
> >
> >3) Tune - +ve or -ve tuning current ? 500mA seems typical. What is the
> >initial freq with no current applied - Low, mid or High Freq ? What
> >happems with -ve current ?

>
> Its a coil. Current through it determines output freq. The similar
> units are 20 MHz/mA so 2-8 GHz would be about 100-400 mA. If current
> is too low or too high it won't oscillate. Spec may be 10 ohms in
> series with 95 mH.
>
> >
> >4) FM - Presumably fine tuning on 'Tune' but with lower inductance so
> >higher agility ??
>
> Usually used for phase locking or FM modulation. You can use without
> this. Specs for units I have are all 310 kHz/mA. In addition to
> finer control, you can also control this coil with a higher
> frequency modulation than Tune. Spec may be 1 ohm in series with 1.7
> uH.
>
> >
> >5) RF power level +5 to +15dBm seems typical, is this about right ?
>
> Three units I have specs for with 2-8 GHz range have nominal outputs
> of 14.8, 20 and 23 dBm so its probably one of those. Output may vary
> by 5 or more dB across the frequency range.
> >
> >A data sheet would be wonderful.
>
> I gave you most of the important stuff if the units are similar. You
> should be able to hook up DC voltages and put an adjustable current
> source across the tune coil to see if it works. Should be safe to
> try and you can then tell if the tuning currents match by checking
> output power/freq.
>
> -Rex, KK6MK

1920. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 15:01:03 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933C4762ACD07pookster@216.168.3.50>
Source record: 37024

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
news:nu8t6v410nojd0ft1r4dknt7r4htrb69p2@4ax.com:

> How did you get your license and operate for eight years without
> knowing anything about grounding? Boggles the mind.

Cheap shot. Shame on you.

--
Bill, W7TI

1921. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 15:25:53 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4njf9$227udl$1@ID-150848.news.dfncis.de>
Source record: 37025
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:JOGba.52032$F1.2038@sccrnsc04...
> Richard, send me a personal e-mail.
>
> W4ZCB

Hello Harold

I don't know if you have been following my frantic threads, scattered everywhere, on xtal filters etc, but I feel almost in a spin as to what do with modifying a FR50B FL50B set-up.

A mod article said put in the first IF of the RX a surplus type 5200 Khx ztal filter and suggested SEI QC1246AA or QC1246AC. These are narrow filters, perhaps 2.7 Khz to 3 Khz BW. Problem is that such narrow filters will put a spanner into the works of my intended other mods. Why, because a narrow 5.2 Mhz xtal filter would in fact be centered on SSB audio, not on the carrier. So, switching over to CW the CW carrier (same frequency as SSB carrier) would be attenuated, because the carrier as we know is to one side of the SSB centre frequency. This does not matter with SSB because we inject the carrier by way of BFO.

I wanted the TX and RX to read correct frequency, I do not want to have to retune 1.5Khz to place the CW signal into middle off a filter passband.

So I eventually figured I'd need something like a 6Khz filter in the 1st IF.

Rich.

1922. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 16:39:48 UTC
From: novatech@eskimo.com
Message-ID: <b4nnskeks1@eskinews.eskimo.com>
Source record: 37026

Send me some email with specific questions, I might be able to help. The point about IOUD being an output on default is important. The 1st routine in my code is called "own_IOUD" where I take control from the AD9854.

If all you do is write to the frequency register, you should get an output.

Of course, I would love it if you purchased my DDS8m for a "known working" AD9854 example.

Steve.
--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

1923. Re: Got a 5.2Mhx crystal filter in your junkbox?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 17:29:15 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87of4gxzmc.fld@barrow.com>
Source record: 37027
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote:
>Hello Harold
>
>I don't know if you have been following my frantic threads,
>scattered everywhere, on xtal filters etc, but I feel almost in a
>spin as to what do with modifying a FR50B FL50B set-up.

It would have been best if these threads had all been
crossposted rather than multiposted. You would have had all
interested parties seeing all of the interested replies...

>A mod article said put in the first IF of the RX a surplus type
>5200 Khx ztal filter and suggested SEI QC1246AA or QC1246AC.
>These are narrow filters, perhaps 2.7 Khz to 3 Khz BW. Problem
>is that such narrow filters will put a spanner into the works of
>my intended other mods. Why, because a narrow 5.2 Mhz xtal
>filter would in fact be centered on SSB audio, not on the
>carrier. So, switching over to CW the CW carrier (same frequency
>as SSB carrier) would be attenuated, because the carrier as we
>know is to one side of the SSB centre frequency. This does not
>matter with SSB because we inject the carrier by way of BFO.
>
>I wanted the TX and RX to read correct frequency, I do not want
>to have to retune 1.5Khz to place the CW signal into middle off a
>filter passband.
>
>So I eventually figured I'd need something like a 6Khz filter in
>the 1st IF.

You might want to read up on modifications for the Drake R4C
receivers. They have a first IF of 5645kHz, and were originally
equipped with a 12 kHz filter following the first mixer (additional
selectivity came at later stages). That filter is too wide and
has broad shoulders. This is aggravated greatly by a relatively
poor 2nd mixer stage design.

You can find all manner of interesting discussion about the
merits of replacing the filter with a very good 8 kHz filter
(wide enough to allow the noise blanker to work), a 6 kHz
filter (best for ssb, but it does impair the noise blanker),
or a 600 Hz filter (best for CW). Also there are discussions
about various modifications to improve the design of the 2nd
mixer, all of which you'll find interesting too.

It should be noted that out of the box a Drake R4C was not a very good performer, but with a number of modifications it is one of the best, and arguably the best, receiver available in terms of sensitivity, dynamic range, and overload characteristics. Hence the modifications for it are worth researching as an example of good engineering.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

1924. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 17:32:05 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0303120932.23496b92@posting.google.com>
Source record: 37028

et472@FreeNet.Carleton.CA (Michael Black) wrote in message
news:<b4mk9s$3m4$1@freenet9.carleton.ca>...
> Dan Stanger (dan.stanger@ieee.org) writes:
> > Does anyone have a copy of the paper by Don Norgaard, titled
> > A Third Method of Generation and Detection of Single-Sideband Signals,
> > published in the Procedings of the IRE, Dec. 1956?
> > It describes how to generate ssb with 4 balanced modulators,
> > but without phase shift networks and filters.
> > Thank you,
> > Dan Stanger
> >
> I didn't know that he'd written such an article. The scheme
> is also known as the Weaver method...
> (bibliography snipped...)

The original I.R.E. article was indeed by Weaver, and
the December 1956 issue is entirely about SSB. I found
it in the University of Toronto library and spent a
pleasant afternoon reading it from cover to cover.

S53MV has published a collection of radios based on
the same basic layout that he calls "zero IF", but
are Weaver/3rd method by any other name.

There was another Weaver design in RadCom (RSGB)
circa 2000.

Since all you need is a quadrature audio signal and
two very sharp low-pass filters, this method lends
itself to a very simple DSP implementation. The build-
ing blocks have all been published, many times, in
many forms. What are you waiting for? Go get them!

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1925. GUF-1 8 pole filter: Specs required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 19:23:43 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4o1ec$1smp14$1@ID-150848.news.dfncis.de>
Source record: 37029

Hi

Can anyone supply me with the specs for this filter, detailed
specs if possible.

(Might try to copy specs with homebrew xtal filter)

Thank you.

Rich.

1926. Re: 10GHz Gunn oscillator question..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 20:29:08 UTC
From: c c o x at u h c dot c o m <spammers.can@bugger.off.pl>
Message-ID: <b4o5ak$4is$2@gabriel.uhc.com>
Source record: 37030

zindazenda <zen@lineisp.co.uk> wrote:
> hello...

> can anyone tell me what polarization ,vertical or horizontal) when looking
> into a typical 10ghz gun oscillator unit (ie sofan doppler unit,) with the
> gun diode vertical, connections on top, longest side of waveguide horizontal
> I will be getting???

From your description of the waveguide orientation, you will get vertical
polarisation.
--
Chris Cox, N0UK/G4JEC NIC Handle: CC345
UnitedHealthGroup, Inc., MN10-W116, UNIX Services & Consulting
6300 Olson Memorial Highway, Golden Valley, MN 55427

1927. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 20:37:09 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v6v6juoid5q4d1@corp.supernews.com>
Source record: 37031
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Not only will these guys make small quantities, they are absolutely great. They will make you whatever you want, and if you don't know what you want (probably you don't when it comes to the gory details of crystal parameters), they can help you figure it out. They are not terrifically cheap (figure $15-20 a crystal or so for very small numbers), and they are not
fast (at LEAST a 2 week wait), but they will make sure you get *exactly* what you need.

To tell the truth, after seeing your need to keep a specific IF, I would probably call International and tell them your story. You will probably pay the high end of their price, but if you get 5 crystals from Joe Blow crystal manufacturer, they are NOT going to be matched. You will want 20 or more crystals to get 5, and for that you want to be using a frequency where you can pay a buck or less for a crystal. International will get you crystals that are close enough for your purposes, and they probably will help you choose specifications that don't result in paying too much.

Another thing about ICM, they actually test before they ship, and once in a while they will test your crystals and they will fail, so there could be a longer delay as they go back and re-manufacture your crystals. So while they usually take a couple of weeks, and they will tell you exactly the schedule, once in a while you will get a call that you will need to wait a couple more weeks, but in my experience, that is pretty rare. The good news is that they tend to keep you informed.

..

"Steven Swift" <novatech@eskimo.com> wrote in message
news:b4m3hk$5fl$1@eskinews.eskimo.com...
> "MattD.." <mattd145@msn.com> writes:
>
> >MattD..
>
> >Shameless plug:
> >http://www.mattsnetwork.co.uk
>
> I think these guys will still make to order small quantities of crystals:
>
> http://www.icmfg.com/
>
> Steve
> --
> Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com

> NOVATECH INSTRUMENTS, INC. P.O. Box 55997
> 206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

1928. Re: Anyone using C-64, VIC-20, CoCo, Jaguar, Apple II? New ConTiki OS interesting.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 21:24:58 UTC
From: Joseph Fenn <jfenn@lava.net>
Message-ID: <Pine.BSI.4.44.0303121124340.18680-100000@malasada.lava.net>
Source record: 37032
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

How about a Kintiki for the Commodore 128!!!

****
* Ham KH6JF AARS/MARS ABM6JF QCWA WW2 VET WD RADIO *
****

1929. Re: Question about YIG oscillators - care and feeding

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 22:31:49 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <hadv6vcqos63tu4h7t0l2ne6pgeautnl72@4ax.com>
Source record: 37033

On 12 Mar 2003 06:57:38 -0800, markaren10@yahoo.com (Mark Aren)
wrote:

>Main tuning - is this intended to work with bipolar current (+- 200mA)
>or unipolar ? 0..200mA ? Looks like it's unipolar from the way you
>phrase your reply.
>

Yes, it is a unipolar current. The (+) goes toward the positive
voltage and (-) toward the negative (usually ground). The intensitiy
of the magnetic field passing through the YIG sphere determines the
resonant frequency.

I'd suggest, hook up an adjustable current source on the tune coil
and ramp it up slowly from zero. If the specs on your unit match
what I have documented, I would expect it to start oscillating
around 2 GHz when the current is about 100 mA. As you increase the
current, the frequency should go up until it stops oscillating
somewhere near 8 GHz or 400 mA.

I'd measure for power output first and be sure your counter can
handle the output before measuring frequency.

-Rex, KK6MK

1930. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 22:40:19 UTC
From: Dan Stanger <dan.stanger@ieee.org>
Message-ID: <3E6FB753.F664E8A3@ieee.org>
Source record: 37034

Thanks for your responses. My reference (Taub and Shilling, Principles of Communications Systems) was in error.

Dan Stanger wrote:

> Does anyone have a copy of the paper by Don Norgaard, titled
> A Third Method of Generation and Detection of Single-Sideband Signals,
> published in the Procedings of the IRE, Dec. 1956?
> It describes how to generate ssb with 4 balanced modulators,
> but without phase shift networks and filters.
> Thank you,
> Dan Stanger

1931. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 22:41:03 UTC
From: Eric Ferguson <GEFERG@prodigy.net>
Message-ID: <3IOba.1688$IF1.566@newssvr19.news.prodigy.com>
Source record: 37035

Hi Max,

Thanks for the pointer....I was cleaning out some stuff the other day and came upon this instruction manual(?). Has the schematic, how to operate, etc. It was done in one of their old "P" boxes (for push-in terminals?). Two transistors are used for audio and the other is used in a high gain detector. It doesn't actually mention SSB reception, but does CW. Also needs a crystal earphone. I just might try building one just for giggles. Somewhere around here I do have an old high impedance headset that would probably work with it.

Again, THANKS!!! Eric

1932. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 23:14:55 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b4of1b$ve8$1@slb4.atl.mindspring.net>
Source record: 37036

Dan:

I have a "yellowed" copy of Weaver's original IRE article from Proc IRE.

Norgaard did write a "repise" article about Weaver's "third method" in
QST Magazine a few years later.

If you are interested, send me an email and I'll go make a copy of the
original Weaver article and send it to you.

I saw a posting by Michael on the thread about the write up on Weaver's
method in Don Stoner's [W6TNS] old SSB book. Wow... that's where I first
heard of that third method myself from Stoner's "New Sideband Handbook
which I bought for $3.00 back in 1958!

This method is/was the first widespread exposition of the use of what today
is called Quadrature Amplitude Modulation [Really should be called
Quadrature
Carrier Modulation or QCM] which is the most general way of generating
modulated
waveforms. A QCM modulator can be used to generate all types of modulation
from AM to SSB to VSB and ISB and FM, etc...

The earliest mass use of QCM was the NTSC [Never Twice the Same Color]
North American color Television system. Today most all modern data modems
use some form of QCM, even the DMT [OFDM] systems use QCM on the
individual frequency "bins".

And... I believe that Weaver [He was at MIT at the time...] was the first to
expose these methods to the general community with his now celebrated
"Third Method of Generating SSB" paper.

--
Peter K1PO
Indialantic By-the-Sea, FL.

"Dan Stanger" <dan.stanger@ieee.org> wrote in message
news:3E6FB753.F664E8A3@ieee.org...
> Thanks for your responses. My reference (Taub and Shilling, Principles of
> Communications Systems) was in error.
>
> Dan Stanger wrote:
>
> > Does anyone have a copy of the paper by Don Norgaard, titled
> > A Third Method of Generation and Detection of Single-Sideband Signals,
> > published in the Procedings of the IRE, Dec. 1956?
> > It describes how to generate ssb with 4 balanced modulators,

> > but without phase shift networks and filters.
> > Thank you,
> > Dan Stanger
>

1933. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-12 23:18:47 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4of5j$21noq7$1@ID-150848.news.dfncis.de>
Source record: 37037
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:v6v6juoid5q4d1@corp.supernews.com...
> Not only will these guys make small quantities, they are
absolutely great.
> They will make you whatever you want, and if you don't know
what you want
> (probably you don't when it comes to the gory details of
crystal
> parameters), they can help you figure it out. They are not
terrifically
> cheap (figure $15-20 a crystal or so for very small numbers),
and they are
> not fast (at LEAST a 2 week wait), but they will make sure you
get *exactly*
> what you need.

This thing of making xtal filters is certainly a shakey affair in some respects. First of all you need a filter spec for the purpose you want the filter for. Well this is a all a bit nebulous to me right now, but (under plan #1) I'd say I need specs simalarish to GUF -1 8Khz, 8 pole filter. Okay, once you nail down your filter spec you got to build the filter. Well, in the end you have to specify xtal parameters. Well, how do you end up getting the right xtal specs. I mean sure, you can mess with a filter program (I just bought AADE filter software) and come up with some xtal parameters if you mess around with the parameters, and send them to the manufacturer, but the specs might be silly (impractical) xtal specs even though xtals of that spec would in fact produce the filter you want. But I think the practical way, is to seek some specs: you need some specs from the manufacturer that will be in the ball-park to produce the filter specs you are after.

But, some manufacturers might not be as experienced at offering specs as others. I was given some specs today in relation to xtals the subject of a quote, but actually, I think they are wrong. The specs will not make a filter with anywhere near 5Mhz center frequency; let alone required BW, stopband attenuation etc etc. In fact I only got 3 out of the 4 parameters I need for the filter program.

Talking to a xtal manufacturer who can give you his xtal parameters and who knows likely xtal parameters that will do the job could be very important.

Alternatively, you just order some xtals of the correct frequency
and hope the filter turns out okay.

Rich.

1934. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 00:25:12 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pan.2003.03.11.20.15.57.262808@oceanfree.net>
Source record: 36916

On Mon, 10 Mar 2003 17:39:02 -0500, H. Enquist wrote:

> Thanks for all the input. My original question was sparked by the fact that
> an European friend of mine is using a Swedish positive photo resist product
> (spray) which is available in a inexpensive size can.
>
> Seems that there is no such thing available this side of the pond....
> Harry VE3MAL

I used to use a spray-on photo resist made by Electrolube.
I'm not sure of the product number, I think it was called RP50.

73, Ed. EI9GQ.

--

Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

1935. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 00:33:50 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <uojv6v031m1bd0kv3jsjkugub0kili8tn2@4ax.com>
Source record: 37038

In <Xns933C4762ACD07pookster@216.168.3.50>, "Bill, W7TI"
<jamspam@upyours.now> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
>news:nu8t6v410nojd0ft1r4dknt7r4htrb69p2@4ax.com:
>
>> How did you get your license and operate for eight years without
>> knowing anything about grounding? Boggles the mind.
>
>____
>
>Cheap shot. Shame on you.

Cork the sactimonious rhetoric: Antennas and grounding are two of the three most important parts of any radio system, the third being the actual radio. Anybody who didn't learn that much while studying the Radio Amateur's Handbook (or other appropriate educational resource) for his/her license shouldn't have passed the test. Even if it didn't really sink in (i.e, passing the test by memorizing the answers to the question pool), he has had eight years of jawing on the box to discuss the issue. And isn't that one of the primary purposes of Amateur radio, to "advance the art of their hobby" -- or wasn't that part of the question pool?

Shame on ME? Hell, I'm not even a ham -- I'm a CBer!

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1936. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 00:43:57 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933CAA360D168pookster@216.168.3.50>
Source record: 37039

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
news:uojv6v031m1bd0kv3jsjkugub0kili8tn2@4ax.com:

> Anybody who didn't learn that much while studying the
> Radio Amateur's Handbook (or other appropriate educational resource)
> for his/her license shouldn't have passed the test.

When you get to be in charge of the tests, you can flunk anyone who
doesn't understand grounds. In the meantime, I suspect this gentleman,
like a lot of us, thought he *knew* about grounds and later on realized
there was still some more to learn. Perhaps we should just take him out
back and shoot him?

In any event, please cork the put downs for some one who is asking honest
questions and trying to learn something. Better yet, focus on your
fellow CBers. Now there's a target-rich environment!

--
Bill, W7TI

1937. Suggestions for mast-mounted 2m pre-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 00:46:30 UTC
From: la8ak.xnd@online.no
Message-ID: <3e6fd16f.202963237@news.online.no>
Source record: 37040

Put my ideas on http://home.online.no/~la8ak/10a.htm

it has been described in VHF communications 20 years ago, and was
modernized 10-15 years ago

I don't care the least if it is too complex for somebody. I often
receive complaints that my circuits are too complex, the only thing I
care for is reliability. Have never had any problems with mastmounted
pre-amplifiers on 2m, 70, 23cm, while it is quite common to burn out a
pre-amplifier, but I don't see the point

73 Jan-Martin
LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

1938. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 01:27:29 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <58nv6vsj73379bb6100dfofq8b2o5tf8uq@4ax.com>
Source record: 37041

In <Xns933CAA360D168pookster@216.168.3.50>, "Bill, W7TI"
<jamspam@upyours.now> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
>news:uojv6v031m1bd0kv3jsjkugub0kili8tn2@4ax.com:
>
>> Anybody who didn't learn that much while studying the
>> Radio Amateur's Handbook (or other appropriate educational resource)
>> for his/her license shouldn't have passed the test.
>
>____
>
>When you get to be in charge of the tests, you can flunk anyone who
>doesn't understand grounds. In the meantime, I suspect this gentleman,
>like a lot of us, thought he *knew* about grounds and later on realized
>there was still some more to learn.

Speculation.

> Perhaps we should just take him out
>back and shoot him?

If I had come to the same conclusion I wouldn't have provided the link
to the ARRL site.

>In any event, please cork the put downs for some one who is asking honest
>questions and trying to learn something. Better yet, focus on your
>fellow CBers. Now there's a target-rich environment!

That's the very same holier-than-thou attitude that sours my taste
buds whenever I get the appetite for a ham license. Perhaps you should
stop by rec.radio.cb sometime -- despite the abundance of technical
voodoo, you might be suprised by how many of them know about proper
grounding!

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1939. Re: 10ghz gun oscillator question..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 01:33:12 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047519188.343558@auth2.dns.griffin.net.uk>
Source record: 37042

thanks..
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1047480655.74793@auth2.dns.griffin.net.uk...
> hello...
>
> can anyone tell me what polarization ,vertical or horizontal) when looking
> into a typical 10ghz gun oscillator unit (ie sofan doppler unit,) with the
> gun diode vertical, connections on top, longest side of waveguide
horizontal
> I will be getting???
>
> Also on your typical lnb ie amstrad blue cap vertical or horizontal
> polarization when supplying 13V NOT 18v to the LNB...
>
> modifying blue cap to transmit and i need to know which fet to install in
> output stage h or v..above questions will answer ..using same + sat can to
> rx.comparing against dopplar unit for range and drift.
>
> thanks simon G0zen (dont you find the more one learns the more one
> discovers that you know nothing.)learning about microwaves the hard way...
>
>

1940. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 01:51:13 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3E6FE420.AB1D8A00@edge.net>
Source record: 37043

I have the December 1956 issue. The article you are referring to is by
Donald
K. Weaver, Jr.

Norgaard has two articles in the issue, one entitled "The Phase-Shift
Method of Single-Sideband Signal Generation" and the other "The
Phase-Shift Method of Single-Sideband Reception".

Bob, K4QQK

Dan Stanger wrote:

> Does anyone have a copy of the paper by Don Norgaard, titled
> A Third Method of Generation and Detection of Single-Sideband Signals,
> published in the Procedings of the IRE, Dec. 1956?
> It describes how to generate ssb with 4 balanced modulators,
> but without phase shift networks and filters.
> Thank you,
> Dan Stanger

1941. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 03:04:35 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933CC20DCD46Apookster@216.168.3.50>
Source record: 37044

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
news:58nv6vsj73379bb6100dfofq8b2o5tf8uq@4ax.com:

> That's the very same holier-than-thou attitude that sours my taste
> buds whenever I get the appetite for a ham license.

We hams hope your taste buds remain soured for a good long time. Anyone who would insult a guy asking an honest question is not welcome in the fraternity. You'll be right at home on channel 19.

--
Bill, W7TI

1942. Re: 10ghz gun oscillator question..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 03:36:42 UTC
From: MaSh <jon.shamash@ntlworld.com>
Message-ID: <3E6FFCCA.6BEBD866@ntlworld.com>
Source record: 37045

have a look at www.qsl.net/g3pho he has an excellant beginners guide.

regards

Jon

zindazenda wrote:
>
> hello...
>
> can anyone tell me what polarization ,vertical or horizontal) when looking
> into a typical 10ghz gun oscillator unit (ie sofan doppler unit,) with the
> gun diode vertical, connections on top, longest side of waveguide horizontal
> I will be getting???
>
> Also on your typical lnb ie amstrad blue cap vertical or horizontal
> polarization when supplying 13V NOT 18v to the LNB...
>
> modifying blue cap to transmit and i need to know which fet to install in
> output stage h or v..above questions will answer ..using same + sat can to
> rx.comparing against dopplar unit for range and drift.
>
> thanks simon G0zen (dont you find the more one learns the more one
> discovers that you know nothing.)learning about microwaves the hard way...

1943. IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 03:36:44 UTC
From: Woody <KZ4AK@MUNGED.att.net>
Message-ID: <3E6FFCD5.D5E3F55C@MUNGED.att.net>
Source record: 37046

Please Un-munge return email. Sorry, getting scores of spam a day
now.

Hi All!

Just got new Icom V8000 (no mods) and programming software. The $35
cable (DB9 - 1/8" Phone to Radio) seemed a truly poor value for a
homebrewer. I didn't order, but built one. Assuming shaft ground, I
looked at the tip & ring at the V8000 with a scope. On turn on there
was a burst of data from the "tip" line - Ah! Tx out from the Icom.
The ring was steady at +5v - Ah! the RX line. Simple, made cable -
Tip to DB9 pin 2, Ring to DB9 pin 3, shank (shield) to pin 5.

Not so simple! Ran clone/pc software. All that can be user defined is
the com port number. Set to com1, used com1 DB9 on PC (port works
fine to control the K2 rig when running MIXW2 software). The Icom
software could not find the rig. It returned a window telling me to
check com port setting, cable, etc. Tried jumpering/open RTS/CTS at
DB9. Also, knowing (hoping this one) that most '232 ports are pretty
tolerant, reversed Tx/Rx, then back. Same error every try.

V8000 does display "CLONE" nothing else happens on that side.

Grabbing at straws, tried all other port selections with the same
effect. Nada!

Any suggestions?????

Thanks & 73,
Woody

--
My website: http://woody.white.home.att.net/
KZ4AK - Homebrew Ham/Electronics Projects &
Eclectic Scanning Electron Microscope Images

1944. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 03:50:26 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <6eTba.15425$Ty5.1281261@news0.telusplanet.net>
Source record: 36897

With help like this, I can see why this hobby is in such a bad state.
I was feel bad for anybody asking honest questions in this NG.
To the gentleman asking about grounding, try theses links:

http://www.polyphaser.com/ppc_PEN1016.asp

http://www.polyphaser.com/ppc_pen_home.asp

73's

Gerry VE6QLT

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:Kh2UBGBkmwb+EAqp@ifwtech.co.uk...
> Frank Gilliland wrote:
> >How did you get your license and operate for eight years without
> >knowing anything about grounding? Boggles the mind.
>
> Not really - it's in the nature of amateur radio that we pick up
> knowledge as and when we need it.
>
> Grounding is certainly one of those areas where you can go for years
> without really having to think about it, if you're lucky - or you can
> meet big problems as soon as you go on the air.
>
> Also, since "no grounding advice is universal" (ARRL) you're likely to
> keep on meeting different faces of this problem. After 40 years, I still
> am.
>
> >Anyways, you can start here:
> >http://www.arrl.org/tis/info/grounding.html
>
> Thanks - a very good link.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

1945. Re: IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 04:50:55 UTC
From: "Gary P. Fiber" <g.fiber@verizon.net>
Message-ID: <ba307vc3r14bqb42v0eupo257dll7p6nge@4ax.com>
Source record: 36898

On Thu, 13 Mar 2003 03:36:44 GMT, Woody <KZ4AK@MUNGED.att.net> wrote:

>Please Un-munge return email. Sorry, getting scores of spam a day
>now.
>
>Hi All!
>
>Just got new Icom V8000 (no mods) and programming software. The $35
>cable (DB9 - 1/8" Phone to Radio) seemed a truly poor value for a
>homebrewer. I didn't order, but built one. Assuming shaft ground, I
>looked at the tip & ring at the V8000 with a scope. On turn on there
>was a burst of data from the "tip" line - Ah! Tx out from the Icom.
>The ring was steady at +5v - Ah! the RX line. Simple, made cable -
>Tip to DB9 pin 2, Ring to DB9 pin 3, shank (shield) to pin 5.
>
>Not so simple! Ran clone/pc software. All that can be user defined is
>the com port number. Set to com1, used com1 DB9 on PC (port works
>fine to control the K2 rig when running MIXW2 software). The Icom
>software could not find the rig. It returned a window telling me to
>check com port setting, cable, etc. Tried jumpering/open RTS/CTS at
>DB9. Also, knowing (hoping this one) that most '232 ports are pretty
>tolerant, reversed Tx/Rx, then back. Same error every try.
>
>V8000 does display "CLONE" nothing else happens on that side.
>
>Grabbing at straws, tried all other port selections with the same
>effect. Nada!
>
>Any suggestions?????
>
>Thanks & 73,
>Woody

When I worked at Icom the cloning cable was connected , clone out of computer to the ring and the sleeve was ground. The tip is not used for cloning and left open in the cloning cable.

I never supported the V-8000, it came out after I left however if the cable Icom suggests is the OPC-478 with no fancy adaptor then its just as I described. If you ask Icom they used send you a print. Look at the print you will find my name on it, I drew it using orcad a few years ago. Good Luck.

Gary K8IX

1946. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 04:59:50 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933CD596843DBpookster@216.168.3.50>
Source record: 36899

"Gerry MacDonald" <gerry.macdonald@globaltv.ca> wrote in news:6eTba.15425
$Ty5.1281261@news0.telusplanet.net:

> With help like this, I can see why this hobby is in such a bad state.
> I was feel bad for anybody asking honest questions in this NG.
>

Be aware that Mr. Gilliland is not a ham. He's a CBer and proud of it.

--
Bill, W7TI

1947. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 05:19:42 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e6f3750$0$21049@echo-01.iinet.net.au>
Source record: 37020

Jan
I spent about a month tearing my hair out (what little remains of it) trying to get mine working. I got some great support from this newsgroup in spite of my rantings. In the end it was a programming error in the micro so that the DDS lines were still inputs! Interestingly enough, I had actually checked these by writing a 100 msec square wave to these lines and there had been an output. However at normal data rates they didnt work.
One problem I did find however - is there bus contention on startup with the IOUD pin? I was driving mine direct from a buffer and I managed to damage this input so that I could not update the chip externally and had to rely on an internal update. Remember this pin defaults to ouput low with high pulses when the PLL is working.
You will have to have a current limiting resistor here.
Try powering up the PLL - the current should increase with increasing clock.
What clock freq are you using?
120mA sounds rather low unless you are using a slow clock. At 100 MHz the chip will use about 300 mA and 500 mA at 200 MHz without the comparator or sinc filter. IOUD should put out pulses at 1/10 of the clock (I think)
If you have managed to program the control registers but nothing else, maybe one of your address lines is wrong - I ended up checking every single pin on the chip!
One other thought - is the data you are reading out of the control registers the default values? Try changing all of them and reading them back.

Richard

Jan Wagner <jwagner@cc.hut.fi> wrote in message
news:b4ln7a$pl5$1@nyytiset.pp.htv.fi...
>
> "Richard Hosking" <richardh@iinet.net.au> schrieb im Newsbeitrag
> news:3e6d2416$0$19704@echo-01.iinet.net.au...
> > Chris
> > Some ideas
> > The reset pin should be low for 10 master clock cycles.
> > I think your suspicions are right about IOUD. From memory I think you
> should
> > clock this at the end of the 6 byte transfer, not with each byte.
> > Also, the default for the DAC multiplier is zero - you will have to
> set this
> > up. See
> >
> >
> http://members.iinet.net.au/~richardh/Direct%20Digital%20Synthesizer%20u
> sing
> > %20the%20AD9854%20quadrature%20DDS.htm

> >
> > for some code that works in serial mode
>
> Thanks to both for the replies!
>
> I indeed had the multiplier not powered down / bypassed. Now I turned it
> off, and even loaded 0xFF's into both multipliers and freq tuning words
> (like in your source code too). Also tried pulsing the update clock only
> once, after all freq & multiplier data was in the buffer memory. Tried
> "digital powerdown" both in on and off. But the chip still doesn't give
> out more than low-level DC... :-(
>
> Ok then I tried to read back the written and "transaction committed"
> register data. The control register stuff I read back corresponds
> precisely to what was written into the registers. Fine till now. But all
> the freq words and multipliers which are read back are zero!
> Does that sound familiar? Any ideas? Are these registers not supposed to
> be read back?
>
>
> Btw, Richard, I think there's an error in your DDS source code (at least
> in the one on your site):
>
> ldi temp_1,0b00000001 ; QDAC source internal,mode 0 (single tone)
> ; freq update external
> rcall DATA2DDS
>
> The AD9854 datasheet says the last bit should be low/0 for external, and
> high/1 for internal update clock generation (page 21, datasheet revision
> B). So you should be writing an 0x00 to use the external clock.
>
> *sigh* now I'm off to check the PCB board for errors, for the umpteenth
> time. Maybe the AD9854 is half-dead...
>
> I'd still be grateful for comments on what could be going wrong here...
>
> thanks,
> - Jan
>
> --
> **
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR
>
>
>

1948. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 06:01:23 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4p6rj$8ho$1@freenet9.carleton.ca>
Source record: 36901

"Bob G. Mahrenholz" (bobm@edge.net) writes:
> I have the December 1956 issue. The article you are referring to is by
> Donald
> K. Weaver, Jr.
>
> Norgaard has two articles in the issue, one entitled "The Phase-Shift
> Method of Single-Sideband Signal Generation" and the other "The
> Phase-Shift Method of Single-Sideband Reception".
>
> Bob, K4QQK
>
That sounds like an interesting issue; it reminds me again that it
would be neat to see the ARRL put together CDROMs on given themes,
just as they used to have books collecting articles on selected
themes (and still do, though they don't have the feel of the old
books). Get permission to reprint the issue, and put it on a disk
along with important SSB articles from QST (and Ham Radio, since
they seem to have the rights).

Norgaard did have articles with similar themes in QST, actually 8
years before the IRE issue. "A New Approach to Single Sideband",
June 1948, which covers phasing in transmitters and
"Practical Single-Sideband Reception" in July 1948. I have
no idea how those articles compare with the IRE articles.
Both QST articles, though under titles almost like those
IRE titles, are in both the first edition (1954) and
fourth edition (1965) of the ARRL's "Single Sideband for
the Radio Amateur" and the transmitting one is in the fifth edition
(1970). Likely in the other editions too, but I don't have them to check.

The May 1948 issue clearly sets the stage for the articles in
the next two month's issues. He has an article "What about Single
Sideband" in that one, which is an introduction to the topic,
and it's reprinted in all three editions of the ARRL's SSB book
that I have.

Michael VE2BVW

> Dan Stanger wrote:
>
>> Does anyone have a copy of the paper by Don Norgaard, titled
>> A Third Method of Generation and Detection of Single-Sideband Signals,
>> published in the Procedings of the IRE, Dec. 1956?
>> It describes how to generate ssb with 4 balanced modulators,
>> but without phase shift networks and filters.

>> Thank you,
>> Dan Stanger
>

1949. Re: Suggestions for mast-mounted 2m pre-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 06:18:03 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e70228d$0$145$edfadb0f@dtext02.news.tele.dk>
Source record: 36900

Hej Jan-Martin

> Put my ideas on http://home.online.no/~la8ak/10a.htm

Any idea on where the page is ???

Regards Max

1950. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 06:53:37 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E702ACC.730FB805@earthlink.net>
Source record: 36902
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Jim Thompson wrote:
>
> On 12 Mar 2003 00:49:01 GMT, "MattD.." <mattd145@msn.com> wrote:
>
> >Uttered Jim Thompson with scant regard for uk.radio.amateur:
> >
> >> Gee, I date from the "remove crystal from holder and lap with Boraxo
> >> on a glass plate" era ;-)
> >
> >But didn't that have the opposite effect? Raised the frequency, whereas
> >adding a pencil mark would lower it, I mean.
>
> You're correct, I was late to the thread. But I still can't remember
> that crystal case style number... remove a few screws and there you
> go, blank in your hand ;-)
>
> >
> >BTW, some useful PSpice stuff on your web site, Jim. Thanks!
>
> You are quite welcome! Enjoy!
>
> ...Jim Thompson
> --
> | James E.Thompson, P.E. | mens |
> | Analog Innovations, Inc. | et |
> | Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
> | Phoenix, Arizona Voice:(480)460-2350 | |
> | Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
> | http://www.analog-innovations.com | 1962 |
>
> For proper E-mail replies SWAP "-" and "_"
>
> I love to cook with wine. Sometimes I even put it in the food.

FT-243
--

Michael A. Terrell
Central Florida

1951. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 06:59:34 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E702C31.7BFB56DA@earthlink.net>
Source record: 36903
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Richard wrote:
>
> "Jim Pennell" <NoSpam@killspam.com> wrote in message
> news:b4mc6d$a77$1@slb3.atl.mindspring.net...
> > When I wanted to build a CW filter, I used 5.000
> MHz crystals which are
> > VERY common computer timebase crystals and can be
> gotten many places at low
> > cost.
> >
> > The crystal Q was relatively low so I had some
> insertion loss, but for
> > the price I got a 450 Hz CW filter with about 270
> ohms terminating
> > impedance.
> >
> > So if a particular frequency is necessary, custom
> crystals might be
> > needed but if you can shift to one of the computer
> timebase frequencies then
> > the crystals are low cost and easy to get.
>
> What's tending me to stick to the odd crystal frequency
> is that if I change RX 1st IF (say to 5Mhz) I have to
> mess with the TX C.O. and SSB filiter. That has to go
> to 5Mhz. This because I was wanting one VFO to
> control both RX and TX. If the TX had more than one
> mixer in it I probably could just have compensated by
> altering a xtal in a heterodyne ocs, but I cannot do
> that. Other way is to use a sepearate VFO for RX and
> TX. That means building 2 VFOs.
>
> In that case, it might be better to change the C. O.
> frequency and SSB filiter in the TX. And make TX
> crystal filter with cheap 5 Mhz xtals. But then again
> if the SSB filter was in 5000 Khz, C.O.would have
> to be on about 4998.5 Khz. Well here we go again,
> an odd frequency. But could I pull a 5Khz xtal to
> 4998.4 Khz? That way I could use 5000 Khz xtals
> throughout. In both RX and Tx.
>
> But, there is a problem with the RX. If my CW/SSB
> filtering takes place at the 1st IF, I need to build a

> 5000Khz SSB filter. Easy peasy. But for CW I'd have
> to build a xtal filter centered on 4998.5 Khz. How do
> I do that with 5 Mhx xtals?

You can use a single crystal oscillator with two buffers to feed two mixers to move the IF to a convenient frequency, filter it, then move it back. It requires good shielding, but it will work.
--

Michael A. Terrell
Central Florida

1952. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 07:32:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <wyWqFKA6PDc+EAFd@ifwtech.co.uk>
Source record: 36904

Gerry MacDonald wrote:
>With help like this, I can see why this hobby is in such a bad state.
>I was feel bad for anybody asking honest questions in this NG.
>To the gentleman asking about grounding, try theses links:
>
>http://www.polyphaser.com/ppc_PEN1016.asp
>
>http://www.polyphaser.com/ppc_pen_home.asp

Don't shoot *both* messengers - the ARRL link is the very best place to start:
http://www.arrl.org/tis/info/grounding.html

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1953. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 07:40:45 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <uv807vcmt19rc6shi4o8fncle73c82pf46@4ax.com>
Source record: 36905

In <Xns933CC20DCD46Apookster@216.168.3.50>, "Bill, W7TI"
<jamspam@upyours.now> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
>news:58nv6vsj73379bb6100dfofq8b2o5tf8uq@4ax.com:
>
>> That's the very same holier-than-thou attitude that sours my taste
>> buds whenever I get the appetite for a ham license.
>
>____
>
>We hams hope your taste buds remain soured for a good long time. Anyone
>who would insult a guy asking an honest question is not welcome in the
>fraternity. You'll be right at home on channel 19.

Actually, that would be channel 13, as well as 1750m, and VLF from 5
to 9 KHz, places that most appliance-operating hams don't have the
first clue how to work. I am quite content with these bands (that have
been made usable only by the efforts of radio experimenters, many of
which happen to operate outside of your fraternity). Recently the
hammies have been trying to grab 1750m for their own, and if that's
any indication of the future, I'm sure you frat boys will try to annex
any other usable spectrum space just as soon as radios are
manufactured for them that include an instruction manual. But fret
not, there will always be us unlicensed pioneers blazing a path for
you to follow, and you don't have to worry about me taking a step back
and joining your little party.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1954. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 07:49:20 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <rmd07v0ve9755cciqjihd69n9abouedhn1@4ax.com>
Source record: 36906

In <Xns933CC20DCD46Apookster@216.168.3.50>, "Bill, W7TI"
<jamspam@upyours.now> wrote:

<snip>
> Anyone
>who would insult a guy asking an honest question is not welcome in the
>fraternity.

Well then you sure have a lot of licenses to pull if you want to keep
the sainthood status of ham radio -- in case you haven't noticed there
are a WHOLE LOT of very rude hams. So before you start dictating your
morality on those without licenses maybe you should clean up your own
camp, first.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1955. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 10:55:32 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b4po32$2md$1@nyytiset.pp.htv.fi>
Source record: 36907

Hi,

"Richard Hosking" <richardh@iinet.net.au> schrieb im Newsbeitrag
news:3e6f3750$0$21049@echo-01.iinet.net.au...
> Jan
> I spent about a month tearing my hair out (what little remains of it)
trying
> to get mine working.

Certainly isn't very simple. Almost voodo...

Well, ok, actually the I/O interface of the AD9854 is quite reasonably designed IMHO! At least the parallel I/O one - it took me "only" four hours programming and debugging in total to get the AD9854 into a working state.

Serial looks much more dreadful. Parallel I/O seems the easiest and fastest way to go (no pun) - t.ex. no probs with the internal update clock.

> I got some great support from this newsgroup in spite
> of my rantings. In the end it was a programming error in the micro so that
> the DDS lines were still inputs! Interestingly enough, I had actually
> checked these by writing a 100 msec square wave to these lines and there
had
> been an output. However at normal data rates they didnt work.

Maybe, with the buffer chip, the uC pins had enough leakage current between the uC internal input<->output logic blocks, so that the input lines floated up (or down), and then the buffer output went logic high? Not very probable, but just a thought...

> One problem I did find however - is there bus contention on startup with
the
> IOUD pin? I was driving mine direct from a buffer and I managed to damage
> this input so that I could not update the chip externally and had to rely
on
> an internal update. Remember this pin defaults to ouput low with high
pulses
> when the PLL is working.

You probably used the buffer for 5V logic (uC) to 3.3V logic (DDS) conversion?

Sometimes a simple ~1k resistor array (block?) is better than a high current line driver or buffer chip. It works in both directions. 5.0V <=> 3.3V logic level "conversion". At least one can't fry anything that way, not without special talents, that is. ;-)

Btw is the fried input the reason you use the internal update clock in your source code? Or just a bug?

> You will have to have a current limiting resistor here.

I'm using a 3.3V MSP430F149 uC together with the 3.3V AD9854, and the update clock pin works without a resistor. There isn't much current flow on the clock line, even the uC pin is set to output and the io clock is outputting too.

But if you use a high current line driver or logic buffer, your resistor advice would certainly be a good idea!!

> Try powering up the PLL - the current should increase with increasing clock.
> What clock freq are you using?

Now that it works, I got a 200kHz test sine out from both DACs, system clock is 4x50 MHz, and total current draw was about 390mA with all doodads disabled. Still quite low, tho. OTOH, low current draw's just fine with me...

The next interesting task is how to calculate the frequency control registers in an efficient manner...

> 120mA sounds rather low unless you are using a slow clock. At 100 MHz the
> chip will use about 300 mA and 500 mA at 200 MHz without the comparator or
> sinc filter. IOUD should put out pulses at 1/10 of the clock (I think)

It's 1/128 of the system clock - at least when I put in 50MHz without the PLL, the update clock was ~390kHz. That'd be 2.3 MHz if sysclock is 300MHz, so it is "slightly" too fast to be useful. It's a futile attempt to use serial I/O at a 2.3MHz-default I/O-clock... ;-)

> If you have managed to program the control registers but nothing else, maybe
> one of your address lines is wrong - I ended up checking every single pin on
> the chip!

LOL! Same thing here - already checked all pins more than twice!
(cf other posting)

> One other thought - is the data you are reading out of the control registers
> the default values? Try changing all of them and reading them back.

The readback works correctly now. Yet I don't have a single clue about why it _didn't_ work with any other register than the control reg initially. Heck, I didn't even change the software.

Many thanks for your comments and help!!

cheers,
- Jan

****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

1956. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 11:56:13 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b4prl1$22cjai$1@ID-61331.news.dfncis.de>
Source record: 36908
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"J." <nordland37@hotmail.com> wrote in message
news:3e6e376a.5912654@news.freeserve.net...
> On Tue, 11 Mar 2003 11:46:58 -0000, "Hans Summers"
<Hans.Summers@Tudor.Com>
> wrote:
>
> >Forgot to say Richard, BE CAREFUL OF YOUR FINGERS. Those crystal cases
are
> >sharp when you start cutting them off. Tests showed blood was not as good
at
> >lowering the frequency as ink.
>
> Blood or ink, surely that won't be very stable
> for very long (?)

I guess very long is a relative term. Certainly I have been using mine for 6 months and noticed no adverse effects, in fact the modified crystal performs the same as an un-mutilated one in all respects I am able to measure (drift, crystal activity etc).

>
> --
> _____________________________
> __
> \/ o\ Posted by J.
> /__/ West Bank
> Tweeksbury on Severn

1957. Re: Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 12:02:12 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v70t1mgobe5pca@corp.supernews.com>
Source record: 36909

Put this in your pipe and smoke it...

You said you wanted a digital readout on the VFO. One way to accomplish this, of course, is to count the VFO, a process typically performed with a PIC or similar computer, which has the added benefit of seriously whacking the parts count to make a display.

Another approach is to synthesize the VFO, which gives you the display, plus added stability, at the expense of a little phase noise. Typically, the synthesizer is controlled by a micro since often it needs weird inputs and again, the micro gives you the parts count advantage for the display.

OK, now, once you have the micro controlling the VFO, "changing" the VFO is only ones and zeroes.

On the filter ... note the discussion on buying custom crystals. Building a filter for an arbitrary IF can be an expensive proposition. If you can choose an IF based on what frequency you can get cheap crystals, in quantity (because you want to match them for your filter) then building a crystal filter can be pretty cheap. But to decide that you want to build a filter for some arbitrary IF means that you will need custom made crystals of the highest quality, unless you are prepared to buy typical quality in several times the needed quantity to do the matching.

An added consideration, especially for SSB, is that steep skirts are easier to come by at 455 kHz than at 5 MHz.

This doesn't make a broad filter at the first IF any less of a good idea, however.

..

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4n3cd$22ei53$1@ID-150848.news.dfncis.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in
> message
> news:b4n2sp$2129sc$1@ID-150848.news.dfncis.de...
> >
> > >
> > > Plan # 2 I think is the best one. What say? But it
> is
> > > dependent on building crystal filters at these odd
> > > frequencies. Which has to be, unless I start
> messing
> > > with the TX crystal filter and C. O.
> >

>
> Actually, if I was prepared the change TX C. O, I'd
> have to have the C. O. at 4998.5 Khz and I'd make a
> 5.000 Khz SSB filiter. Could I pull a 5 Mhz xtal to
> 4998.5 Khz?
>
> On the RX side I'd make a 5000 Khz SSB filiter, but the
> CW filter would have to be 4998.5 Khz. Could the CW
> filter be made with 5 Mhz xtals?
>
> (All because I was wanting one VFO to control both TX
> and RX).
>
>

1958. Cheap weather data RX??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 12:08:42 UTC
From: tobias_richter_@hotmail.com
Message-ID: <83a39bbc.0303130408.35bc283c@posting.google.com>
Source record: 36910

Hi there

I wonder if there`s a cheap way to build a RX for 4583 and 7646kHz RTTY. That's the frequency for german weatherforecast (for ships) and I want to receive those transmissions. I've got already a program that converts the 50Baud Signal to readable text.
Because of me being just a student and having no money for a Shortwave-RX/TRX I now look for a cheap solution to receive the frequencies. My first suggestions were to use a direct conversion RX with NE612 and TTL-oscillators. But I wonder if it will produce to many intermodulation products by near AM-broadcast stations.
A friend of mine has used a FT847 for receiving test on 4583. The signal was almost 9+30dB at a 21 meter long windom antenna.......
Any suggestions what RX and which antenna I shall use?
Important: It must be cheap! If I get some RX to work I want to build a second one for my school, because I want to get others interested in my geographics class :-)

Tnx in advance de Tobias, DO1NTR

Please mail directly to Tobias_Richter_@hotmail.com

1959. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 15:28:45 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4q83d$rb7$1@freenet9.carleton.ca>
Source record: 36911
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"Michael A. Terrell" (mike.terrell@earthlink.net) writes:
> You can use a single crystal oscillator with two buffers to feed two
> mixers to move the IF to a convenient frequency, filter it, then move it
> back. It requires good shielding, but it will work.

Since it adds two mixers (more things to overload) in the signal path,
another oscillator, and all the various byproducts of the mixing, I'd
only do that as a last extent.

And in this particular case, I wouldn't even suggest it, because it's
going to send things on yet another tangent (and thread) when some
of the basic issues have still not been dealt with.

Michael VE2BVW

1960. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 15:43:14 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933D4E8A07BDpookster@216.168.3.50>
Source record: 36912

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
news:uv807vcmt19rc6shi4o8fncle73c82pf46@4ax.com:

> But fret
> not, there will always be us unlicensed pioneers blazing a path for
> you to follow, and you don't have to worry about me taking a step back
> and joining your little party.
>
>

Was your momma scared by a ham? Just curious where such venom comes from.

--
Bill, W7TI

1961. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 16:43:22 UTC
From: john@Neopha.44in88.net
Message-ID: <slrnb71da4.mv.john@Neopha.44in88.net>
Source record: 36913
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On Wed, 12 Mar 2003 23:18:47 -0000, Richard
<nearlynews_email@ntlworld.com> wrote:
>
>"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
>news:v6v6juoid5q4d1@corp.supernews.com...
(SNIP)
>
>Talking to a xtal manufacturer who can give you his xtal
>parameters and who knows likely xtal parameters that will do the
>job could be very important.
>
>Alternatively, you just order some xtals of the correct frequency
>and hope the filter turns out okay.
>
>Rich.
>

I feel I must add, don't be tempted to order "rush" crystals!
A good "grinder" will age the crystals, then correct the frequency;
with rush units, as soon as they hit the mark, they're shipped,
and _you_ get to deal with the ageing.

--

____
John E. Todd <> jtodd@island.net

Note: Ensure correct polarity prior to connection.

1962. Re: Suggestions for mast-mounted 2m pre-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 17:41:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3e70c293.264704476@news.online.no>
Source record: 36914

On Thu, 13 Mar 2003 07:18:03 +0100, "Max" <Max_Jens@post9.tele.dk>
wrote:

>Hej Jan-Martin
>
>> Put my ideas on http://home.online.no/~la8ak/10a.htm
>
>Any idea on where the page is ???
>
>Regards Max
>
>
sorry, no, the ISP will send a reply within 24 hours from now on!

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1963. FS: German Made BB Centrifugal Blowers, Great for HomeBrew!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 18:01:15 UTC
From: rlucch2098@aol.com
Message-ID: <20030313130115.09255.00000025@mb-fc.aol.com>
Source record: 36915

Hi Guys;
I have a few of these blowers which would make great Amp Air Movers :-)
They are made in Germany, may have a bit of dust but look new.
I was unable to test them because I have no idea how to apply the 115VAC, too
many connections for me, Hi!
Here are some links to product info & distributers w/prices.
They cost over $140 each.>>
Medibix Global Component Database - EBM Industries, Centrifugal G2E120 Series S

Browse the Big Book
MSC Industrial Supply Co.
I would like to get $40 ea shipped.
Pics give all the info>>
http://www.myradioroom.com/blower1.jpg
http://www.myradioroom.com/blower2.jpg
http://www.myradioroom.com/blower3.jpg
http://www.myradioroom.com/blower4.jpg

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's

1964. MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 19:30:09 UTC
From: wa0goz@arrl.net
Message-ID: <3E70DC41.21AA@arrl.net>
Source record: 36917

Does anyone know how to test MOV's please. A google search didn't get me what I need.

Thanks and 73

Henry WA0GOZ

1965. Re: MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 19:43:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <x9LaWFHO9Nc+EAI5@ifwtech.co.uk>
Source record: 36918

wrote:
>Does anyone know how to test MOV's please. A google search didn't get
>me what I need.
>
Depends what you're testing for.

If you're only interested in the breakdown voltage (usually
characterized as 1mA leakage) you can test an MOV with a
variable-voltage DC supply, as you would test a zener diode... except
that you can reverse the MOV and test it with the other polarity too.

If you want to know about the surge-absorbing capacity, you can't make a
static DC test, because those parameters are time- and energy-limited.
You're into heavy pulse technology.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1966. Re: MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 21:26:48 UTC
From: wa0goz@arrl.net
Message-ID: <3E70F798.BB@arrl.net>
Source record: 36919

Ian, I would just like to know if one in a circuit is good or not. That
is open or shorted or burned out etc.

Thanks

Henry

Ian White, G3SEK wrote:
>
> wrote:
> >Does anyone know how to test MOV's please. A google search didn't get
> >me what I need.
> >
> Depends what you're testing for.
>
> If you're only interested in the breakdown voltage (usually
> characterized as 1mA leakage) you can test an MOV with a
> variable-voltage DC supply, as you would test a zener diode... except
> that you can reverse the MOV and test it with the other polarity too.
>
> If you want to know about the surge-absorbing capacity, you can't make a
> static DC test, because those parameters are time- and energy-limited.
> You're into heavy pulse technology.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

1967. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 22:28:47 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <9fv17vc2i72v2f0sin0p6q479nvj7bqt0k@4ax.com>
Source record: 36920

In <Xns933D4E8A07BDpookster@216.168.3.50>, "Bill, W7TI"
<jamspam@upyours.now> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
>news:uv807vcmt19rc6shi4o8fncle73c82pf46@4ax.com:
>
>> But fret
>> not, there will always be us unlicensed pioneers blazing a path for
>> you to follow, and you don't have to worry about me taking a step back
>> and joining your little party.
>>
>>
>
>____
>
>Was your momma scared by a ham?

Talk about cheap shots....

> Just curious where such venom comes from.

From hammies like you, Bill. Go back and read my reply to the original
poster again, but this time set aside your contempt. I may have taken
a poke at the OP, but there was no "venom" in my post -- all that
hatred came from you and your attitude that even mild criticism of a
ham constitutes a "cheap shot". Don't get me wrong, there are a lot of
fine and decent hams. But there are just too many hams like you, hams
who think that once they get their ticket that they have automatically
risen above the crowd, that they are somehow better people than those
without a license. Amateur radio isn't a 'club' or "fraternity". It
isn't a military rank where you can dictate the actions and morals of
others with 'lower' rank. It's just a license to operate a radio for a
hobby. Thats all. And it's because of attitudes like yours that many
fine radio enthusiasts are discouraged from getting a license and
going further with their hobby.

Get a clue, Bill. Then get a new attitude.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1968. Re: MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 22:46:42 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Ci8mhYNSpQc+EAzQ@ifwtech.co.uk>
Source record: 36921

Henry wrote:
>Ian, I would just like to know if one in a circuit is good or not.
>That is open or shorted or burned out etc.
>
If it's a mains MOV, apply power through a light bulb. If the bulb lights to full brightness, it may be that the MOV is shorted (but there are obviously other possible causes).

If the bulb is quite dim, and the equipment shows signs of working, short out the bulb and apply full mains power (through a fused supply of course). But even if everything appears to be OK, this test will not tell you anything new about the MOV - it's not supposed to conduct at normal mains voltages anyway, so it could be either perfectly OK or completely open-circuit.

If the MOV seems to be OK, the only way to be sure that it will protect against abnormal mains spikes is to test it at a higher voltage. Do this *outside* of the equipment it's supposed to be protecting! As I said in the previous posting, test for the onset of conduction (DC voltage required to pass 1mA).

If it isn't a mains MOV, the same principles apply, at whatever voltage it's supposed to operate.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1969. Building your own dummy-load for VHF/SHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 23:37:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3e7115d9.286025723@news.online.no>
Source record: 36922

Some table strateges may not understand that it is possible,
I've mentioned it some times before, but it is too many persons with
strong opinions, but no practical experience,
see how to make it at http://home.online.no/~la8ak/5.htm

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1970. Re: Suggestions for mast-mounted 2m pre-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-13 23:39:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3e711670.286176913@news.online.no>
Source record: 36923

On Thu, 13 Mar 2003 07:18:03 +0100, "Max" <Max_Jens@post9.tele.dk>
wrote:

>Hej Jan-Martin
>
>> Put my ideas on http://home.online.no/~la8ak/10a.htm
>
>Any idea on where the page is ???
>
>Regards Max
>
>
for an unknown reason the ISP had removed my site, and I had to
re-open it after a tip from someone else, it has been a problem for
many other subscribers over here, but now it is operational again, and
a few more items covered tonight

73 Jan-Martin
http://home.online.no/~la8ak/
--
remove ,xnd to reply

1971. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 00:34:00 UTC
From: averyfineman@aol.com
Message-ID: <20030313193400.04776.00001036@mb-ct.aol.com>
Source record: 36924

Hokay people, let's hold fire on some of this.

After working with electrons, fields and waves for more than a half century, I'll reveal some secrets that most folk learn but a few have forgotten:

Electrons, fields and waves don't respect human emotions, human regulations, human opinions, human-anything that doesn't correspond to Laws of Physics.

That's the only Law that electrons, fields and waves respect.

Electrons don't respect anything about pretty certificates or other pieces of paper except for the paper's conductivity and/or dielectric constant. That paper includes money, stock certificates, license forms, and anything else from an "official" or unofficial source.

One can cajole, wheedle, threaten, curse, shout, entreaty, pray to electrons, fields and waves and they won't pay no never mind. They won't care of somebody says method X is "better" or "blows away" method Y according to what someone wrote in QST or Popular Communications or whether it is "supported" by some human organization.

Electrons, fields and waves do their own thing according to Laws of Physics. To avoid going SK too early try to figure out those Laws before pinning on some chicken inspector badge. The life and wife you save may be your own.

Len Anderson
retired (from regular hours) electronic engineer person

1972. FS: BA/HB Tank coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 02:40:26 UTC
From: msix@nmia.com
Message-ID: <uibca.36940$Dp.12955@fe01.atl2.webusenet.com>
Source record: 36925

Unused NOS B&W Model 851 band-switching tank coil assembly
Plated strap 10M coil
Tapped 80-10M plus extra tap for external 160M coil
Rated 500W, 3-4K Rp, total L 17uH
$47 pp 48

Heavy-duty Air-Dux 195-1 PI NET coil
Plated strap 10M coil
10T 4 TPI, 9T 6 TPI, all No 10 wire
Easy KW plus, total L 20uH, looks unused
$67 pp 48

73 - John W7ZFB

1973. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 04:23:00 UTC
From: Stephen Quigg <steveq@bigtime.tip.csiro.au>
Message-ID: <slrnb72m9i.8ht.steveq@bigtime.tip.csiro.au>
Source record: 36926
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

In article <b4q83d$rb7$1@freenet9.carleton.ca>, Michael Black wrote:
> Path: news.optus.net.au!news1.optus.net.au!optus!newsfeed.vmunix.org!news-spur1.maxwell.syr.edu!news.maxwell.syr.edu!cyclone.bc.net!torn!cunews!freenet-news!FreeNet.Carleton.CA!et472
> From: et472@FreeNet.Carleton.CA (Michael Black)
> Newsgroups: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur
> Subject: Re: Anyone have experiece of ordering custom made crystals?
> Date: 13 Mar 2003 15:28:45 GMT
> Organization: The National Capital FreeNet
> Lines: 16
> Message-ID: <b4q83d$rb7$1@freenet9.carleton.ca>
> References: <b4kfcg$20nbbv$1@ID-150848.news.dfncis.de> <b4lcmh$2u4$2@info4.fnal.gov> <b4lf66$20pn06$1@ID-150848.news.dfncis.de> <b4mc6d$a77$1@slb3.atl.mindspring.net> <b4n20p$221j0q$1@ID-150848.news.dfncis.de> <3E702C31.7BFB56DA@earthlink.net>
> Reply-To: et472@FreeNet.Carleton.CA (Michael Black)
> NNTP-Posting-Host: freenet10
> X-Trace: freenet9.carleton.ca 1047569325 28007 134.117.136.30 (13 Mar 2003 15:28:45 GMT)
> X-Complaints-To: complaints@ncf.ca
> NNTP-Posting-Date: 13 Mar 2003 15:28:45 GMT
> X-Given-Sender: et472@freenet10.carleton.ca (Michael Black)
> Xref: news.optus.net.au rec.radio.amateur.homebrew:9358 sci.electronics.design:74326 uk.radio.amateur:53458
>
> "Michael A. Terrell" (mike.terrell@earthlink.net) writes:
>> You can use a single crystal oscillator with two buffers to feed two
>> mixers to move the IF to a convenient frequency, filter it, then move it
>> back. It requires good shielding, but it will work.
>
> Since it adds two mixers (more things to overload) in the signal path,
> another oscillator, and all the various byproducts of the mixing, I'd
> only do that as a last extent.
>
> And in this particular case, I wouldn't even suggest it, because it's
> going to send things on yet another tangent (and thread) when some
> of the basic issues have still not been dealt with.
>
> Michael VE2BVW
>
>

But if you provide a couple of kHz tuning for said oscillator... voila!

Band Pass Tuning.

... and USB, LSB etc is just a matter of switching a few presets that set the PBT to the right place.

Steve Quigg VK2TUM

1974. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 06:31:26 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E715B3E.1A5DCE26@att.net>
Source record: 36927

Frank Gilliland wrote:

> In <Xns933CAA360D168pookster@216.168.3.50>, "Bill, W7TI"
> <jamspam@upyours.now> wrote:
>
> >Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
> >news:uojv6v031m1bd0kv3jsjkugub0kili8tn2@4ax.com:
> >
> >> Anybody who didn't learn that much while studying the
> >> Radio Amateur's Handbook (or other appropriate educational resource)
> >> for his/her license shouldn't have passed the test.
> >
> >>_____
> >
> >When you get to be in charge of the tests, you can flunk anyone who
> >doesn't understand grounds. In the meantime, I suspect this gentleman,
> >like a lot of us, thought he *knew* about grounds and later on realized
> >there was still some more to learn.
>
> Speculation.
>
> > Perhaps we should just take him out
> >back and shoot him?
>
> If I had come to the same conclusion I wouldn't have provided the link
> to the ARRL site.
>
> >In any event, please cork the put downs for some one who is asking honest
> >questions and trying to learn something. Better yet, focus on your
> >fellow CBers. Now there's a target-rich environment!
>
> That's the very same holier-than-thou attitude that sours my taste
> buds whenever I get the appetite for a ham license. Perhaps you should
> stop by rec.radio.cb sometime -- despite the abundance of technical
> voodoo, you might be suprised by how many of them know about proper
> grounding!

I suspect a better question might be -What do you think YOU know about
proper
grounding?

1975. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 06:33:05 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E715BA2.F2661CD8@att.net>
Source record: 36928

Gerry MacDonald wrote:

> With help like this, I can see why this hobby is in such a bad state.
> I was feel bad for anybody asking honest questions in this NG.
> To the gentleman asking about grounding, try theses links:
>
> http://www.polyphaser.com/ppc_PEN1016.asp
>
> http://www.polyphaser.com/ppc_pen_home.asp

So what you'll get there is one commercial vendor's viewpoint on
grounding.
Surely it wouldn't be slanted toward their product would it?

Dick

1976. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 06:38:31 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E715CE7.86E0FDAB@att.net>
Source record: 36929

"Bill, W7TI" wrote:

> Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
> news:uv807vcmt19rc6shi4o8fncle73c82pf46@4ax.com:
>
> > But fret
> > not, there will always be us unlicensed pioneers blazing a path for
> > you to follow, and you don't have to worry about me taking a step back
> > and joining your little party.
> >
> >
>
> _____
>
> Was your momma scared by a ham? Just curious where such venom comes from.

Careful Bill, last time I asked something like that, re CW instead, of a
long-time ham I got
accused of seriously insulting his mother. He wuz fighting mad.

Dick

1977. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 06:40:27 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E715D5C.D6281C3@att.net>
Source record: 36930

Frank Gilliland wrote:

> IAnd it's because of attitudes like yours that many
> fine radio enthusiasts are discouraged from getting a license and
> going further with their hobby.

We keep hearing that from the sort of people who need to find some excuse.

1978. Artificial Ground

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 12:03:56 UTC
From: Ian Pollard <easthorton@msn.com>
Message-ID: <67h37vc2bp60u93etfm56j6krghi68g71k@4ax.com>
Source record: 36931

Hi
Does anyone know where I can find a circuit for an artificial ground.
My shack is located some 5 metres above ground and I have been told
that this could cause problems at HF.

Ian

--
Ian Pollard//Wooler//Northumberland//UK
easthorton@msn.com

1979. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 13:05:07 UTC
From: Nigel Hewitt <news@REMOVETHISnigelhewitt.net>
Message-ID: <3e71cf81$1@news.star.co.uk>
Source record: 36933
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

John Todd wrote:
>
> I feel I must add, don't be tempted to order "rush" crystals!
> A good "grinder" will age the crystals, then correct the frequency;
> with rush units, as soon as they hit the mark, they're shipped,
> and _you_ get to deal with the ageing.

Huh?
I thought the whole trick in modern crystal making was a
quartz plate with the conductors plated and premounted
in the case base and made in ranges.

Then, when the customer names a frequency, you edge grind it
well away from the conductors to bring it up to frequency and
then bang the lid on. All the aging in the conductors
and the mounts having already happened and all that double
handling cost is saved.

Am I out of date already?

nigelH

1980. SMPS Xfmr design equations

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 13:17:38 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <NRSdnQs1wuKhSuyjXTWcpQ@comcast.com>
Source record: 36932

I took the design equations from the Linear Technology LT1683 Push-Pull SMPS driver and put them up in spreadsheet form at www.tech-diy.com/smps.htm

Comments and suggestions are welcome. The recent article in QEX got me going!

Jack

1981. Re: Artificial Ground

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 14:03:50 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3E71E146.D8446F7E@yahoo.com>
Source record: 36934

Ian,

My assumption is that you are talking about transmitting. You won't necessarily have problems 5 meters above your ground rod at HF. You are most likely to have a problem if you are one or one-half a wavelength above ground. Just like one normally doesn't use an antenna with even wavelength multiples.

If you want an "artificial" ground for transmitting, the easiest circuit is a counterpoise. It's just a quarter wavelength piece of wire connected to your transmitter ground. Lay it out on the floor. It can go around the perimeter of the room. Not recommeded to touch it during transmit! Also don't recommed high power. But it should be fine for 100-150 watts or so...

73 de Steve KE4OH

Ian Pollard wrote:

> Hi
> Does anyone know where I can find a circuit for an artificial ground.
> My shack is located some 5 metres above ground and I have been told
> that this could cause problems at HF.
>
> Ian
>
> --
> Ian Pollard//Wooler//Northumberland//UK
> easthorton@msn.com

1982. Re: Artificial Ground

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 14:07:27 UTC
From: jgboyles@aol.com
Message-ID: <20030314090727.00531.00000059@mb-ch.aol.com>
Source record: 36935

>Does anyone know where I can find a circuit for an artificial ground.

The ones I've seen are series LC circuits with a rf ammeter. They are used to try and tune out any reactance you may have in your ground system. You tune for maximum rf current in your ground wire.
In your situation, a 1/4 wavelength piece of wire connected to you rig's ground will provide an rf ground, but only on the frequencies that the wire is an odd multiple of 1/4 wavelength.
73 Gary N4AST

1983. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 15:19:05 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <hgs37v4bstvnj6mk9tolv2uta9g0kcopu8@4ax.com>
Source record: 36936
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On Fri, 14 Mar 2003 13:05:07 -0000, "Nigel Hewitt"
<news@REMOVETHISnigelhewitt.net> wrote:

>Huh?
>I thought the whole trick in modern crystal making was a
>quartz plate with the conductors plated and premounted
>in the case base and made in ranges.
>
>Then, when the customer names a frequency, you edge grind it
>well away from the conductors to bring it up to frequency and
>then bang the lid on. All the aging in the conductors
>and the mounts having already happened and all that double
>handling cost is saved.
>
>Am I out of date already?
>
Seems like a practical way to me.

Semi-custom with a little tweaking is going to be less expensive than
total custom work. Doing the bulk of the work ahead of time makes
sense as well, to allow quick turnaround.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1984. Re: GUF-1 8 pole filter: Specs required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 17:45:49 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4t4g2$21s1og$1@ID-150848.news.dfncis.de>
Source record: 36937

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4o1ec$1smp14$1@ID-150848.news.dfncis.de...
> Hi
>
> Can anyone supply me with the specs for this filter, detailed
> specs if possible.
>
> (Might try to copy specs with homebrew xtal filter)
>
> Thank you.
>
> Rich.
>

I thought the GUF 1 was no longer made, but it is really under
code 2611.1 or 2612.1

http://www.qth.com/inrad/r4c-1if.htm

So, I got my specs.

1985. Re: Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 17:59:10 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4t574$245lrm$1@ID-150848.news.dfncis.de>
Source record: 36938

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:v70t1mgobe5pca@corp.supernews.com...
> Put this in your pipe and smoke it...

>
> On the filter ... note the discussion on buying custom
crystals. Building a
> filter for an arbitrary IF can be an expensive proposition. If
you can
> choose an IF based on what frequency you can get cheap
crystals, in quantity
> (because you want to match them for your filter) then building
a crystal
> filter can be pretty cheap. But to decide that you want to
build a filter
> for some arbitrary IF means that you will need custom made
crystals of the
> highest quality, unless you are prepared to buy typical quality
in several
> times the needed quantity to do the matching.
>
> An added consideration, especially for SSB, is that steep
skirts are easier
> to come by at 455 kHz than at 5 MHz.
>
> This doesn't make a broad filter at the first IF any less of a
good idea,
> however.

There is still some mileage in sticking in a broad filter in the
1st IF, and doing the main filtering at 455Khz. I've been trying
to find a filter parameter to aim for and someone mentioned
filters for the Drake R4C series. Well, the RX uses a 1st IF of
5645 Khz not that different from my RX 1st IF on 5172.4 Khz.
Eventually I've hit paydirt and found the filter specs of a
replacement filter fot the R4 series. It's here:

http://www.qth.com/inrad/r4c-1if.htm

I may try to copy the specs with a homebrew filter, except of
course the centre frequency.

1986. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 18:12:53 UTC
From: averyfineman@aol.com
Message-ID: <20030314131253.11134.00000023@mb-mp.aol.com>
Source record: 36939

In article <3e71cf81$1@news.star.co.uk>, "Nigel Hewitt"
<news@REMOVETHISnigelhewitt.net> writes:

>John Todd wrote:
>>
>> I feel I must add, don't be tempted to order "rush" crystals!
>> A good "grinder" will age the crystals, then correct the frequency;
>> with rush units, as soon as they hit the mark, they're shipped,
>> and _you_ get to deal with the ageing.
>
>Huh?
>I thought the whole trick in modern crystal making was a
>quartz plate with the conductors plated and premounted
>in the case base and made in ranges.
>
>Then, when the customer names a frequency, you edge grind it
>well away from the conductors to bring it up to frequency and
>then bang the lid on. All the aging in the conductors
>and the mounts having already happened and all that double
>handling cost is saved.
>
>Am I out of date already?

"Aging" in quartz crystal units is a specification more
suited to metrology, the science of measurement, and is
a factor in high-stability crystal oscillators used as time-
bases in frequency counters. Few hobbyists have the
equipment to measure the aging effects which are
typically in the parts per billion range.

What should be of more concern is the temperature curve
of a quartz crystal unit, particularly for portable and mobile
applications. Such is in the parts per million range, a
thousand times greater than typical aging specifications.

All of the major manufacturers of quartz crystal units in the
USA have websites and include specification sheets that
can be filled out by customers for special units, along with
explanations of what is what and limits of specifications for
various types of crystal units. Corning Frequency Control
has a good site with many application notes and papers
about quartz crystals and their characteristics.

http://www.corningfrequency.com

There are many, many factors that drive the cost of a quartz crystal unit. It's a seller's market and few can successfully open a sealed crystal can, tweak a new frequency, reseal it to make it work. Quartz crystal units last much longer if kept intact in their sealed packages.

Important factors for anyone to consider when ordering a quartz crystal unit are -

1. Series or parallel resonance...makes a big difference as to manufacturer's frequency calibration specification. If parallel resonance, the added circuit capacity as stated by maker is the nominal value to be used to hit the stated frequency.
2. Drive level expected...more important for vacuum tube circuits than semiconductors. Manufacturers usually have typical values in common circuits as a guide for customers.
3. If an overtone crystal oscillator is used, compare a maker's application description with the type of circuit you want to use. Improperly used, an overtone oscillator circuit might wind up as just an L-C oscillator with the quartz crystal doing nothing.
4. Ambient operating temperature range expected, "ambient" being the in-board/in-chassis temperature. There will be a drift of frequency over temperature with any quartz crystal unit. Frequency variation over temperature is stated by crystal makers...but curves don't always follow common Handbook figures reprinted for years.
5. Have some way of measuring frequency in your circuit, whether it's an old BC-221 or an ipsy-pipsy $6K box with many digits on the front panel. Without such an instrument all you can say is "it works" or "it doesn't work."
6. Be practical in specifying what you order. 50 PPM (Parts Per Million) manufacturer's stated accuracy is typical and is equal to 0.005 percent (500 Hz at 10 MHz). If a 100 PPM accuracy works in your application and costs less, use it.
7. Many crystal unit manufacturers lay-up stock values based on previous customer demand. Those are quickest to get and usually cost less than custom frequencies. If a stock frequency value will work with some changing of other frequencies in your system, fine...remember that parallel resonance circuits can be trimmed within a few tens of millions part accuracy with a small variable capacitor.
8. Don't expect to get old FT-243 or FT-241 holders shown in 40 to 50 year old amateur literature. The quartz crystal industry has come a long way since the boom of WW2 days...better methods of cutting, grinding, etching, and enclosing crystal units. They usually know how to handle their quartz better than you thought. :-)
9. Don't get off on buzzwords which apply to other technologies in electronics. "Oscillator phase noise" figures won't apply to typical amateur radio applications and most amateurs don't have the equipment to measure that. If you have a

need to toss buzzwords, try to read up on what they mean
and how to measure it first.

Len Anderson
retired (from regular hours) electronic engineer person

1987. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 18:16:39 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303141016.78da53f1@posting.google.com>
Source record: 36940

alskdjfhg72000@yahoo.com (Sam B.) wrote in message
news:<3c7e4e8c.0303102007.2a2fda12@posting.google.com>...
> lugehall@hotmail.com (J.B. Hall) wrote in message
news:<bc96ecb7.0303100945.2e6c0b24@posting.google.com>...
> > Sam,
> > Thanks for the information. I would sure be interested in learning
> > more about the process you use. I went to the Think and Tinker web
> > page http://www.thinktink.com/ and it is a good resource. Do you know
> > what the shelf life of the photoresist film is? It would take me a
> > while to use up 50 feet of it.
> > JBH
>
> They also sell professional carbide drill bits which work very well.
...

See also:
Grizzly
(http://www.grizzly.com/products/item.cfm?itemnumber=G7950&site=grizzly),
Harbor Freight
(http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=34640)
(sometimes on sale for under $10!),
and Marlin P. Jones
(http://www.mpja.com/productview.asp?product=8778+TL).

Others, anybody??

These are typically re-sharpened drills, and the ones pointed to don't
give you a choice of specific sizes, but at as low as $0.20 per drill,
I've found them to be good deals. I haven't had any complaint about
any not being sharp; I generally break them from side pressure before
they wear out anyway.

(BTW, are there non-professional carbide drill bits?? ;-)

Cheers,
Tom

1988. VFO offset when receiving and transmitting.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 19:01:29 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4t8r5$23sisd$1@ID-150848.news.dfncis.de>
Source record: 36941

TX and RX seperates. Is it realistic to have a VFO switch
between two output frequencies when operating? That is output
F1 when receiving, output F2 when transmitting. I suppose it
could be, but may not work well with break-in CW.

1989. Beam antenna question (straight vs. angled elements)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 19:18:47 UTC
From: mcalhoun@ksu.edu
Message-ID: <b4t9un$1sf@unix2.cc.ksu.edu>
Source record: 36942

Yesterday I removed a TV antenna from the tower of a recently-deceased local ham (I bought the tower), and since the antenna is in good-enough shape to revamp into a two-meter beam, I'm just curious: why do some TV antennas have elements which stick out at 90-degree angles from the boom and others have elements which "point forward" at about 45-degree angles? Is this for impedance matching (both kinds are usually "fed" with 300-ohm twin-lead)?

Yes, I've been licensed long enough that I should know everything, but since I don't, I'm asking.

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1990. Re: Beam antenna question (straight vs. angled elements)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 20:46:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v74fs937ud3nb7@corp.supernews.com>
Source record: 36943

None of us have been licensed long enough that we know everything.

TV antenna elements are sometimes bent into a V shape to take advantage of the fact that the higher VHF channels are at about three times the frequency of the lower channels. By bending an element, they get a rudimentary V beam and associated gain at the higher channels while the bending has little effect on the lower channels.

I've done the same trick with a 40 meter dipole. A straight 40 meter dipole has a cloverleaf pattern on 15 meters. But by bending each half 30 degrees, the lobes line up on 15 meters to make a bidirectional pattern with a bit of gain. The bending doesn't have much effect on the pattern at 40 meters. Naturally, aligning the lobes, and the associated gain, is useless at best if the lobes don't end up pointing in the directions you want to communicate.

Roy Lewallen, W7EL

mcalhoun@ksu.edu wrote:
> Yesterday I removed a TV antenna from the tower of a recently-deceased
> local ham (I bought the tower), and since the antenna is in good-enough
> shape to revamp into a two-meter beam, I'm just curious: why do some TV
> antennas have elements which stick out at 90-degree angles from the boom
> and others have elements which "point forward" at about 45-degree angles?
> Is this for impedance matching (both kinds are usually "fed" with 300-ohm
> twin-lead)?
>
> Yes, I've been licensed long enough that I should know everything, but
> since I don't, I'm asking.
>
> --Myron, W0PBV.

1991. Re: Re-radiating RF from a ferrite bead

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 21:16:18 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com.notformail!>
Message-ID: <clg47vkvmd586kfveh6kka37lai0sd1vsb@4ax.com>
Source record: 36945
Cross-posted to: sci.electronics.design,sci.electronics.misc,sci.electronics.repair,rec.radio.amateur.homebrew

On Fri, 14 Mar 2003 10:36:12 -0700, "Bob Myers"
<nospamplease@addressinvalid.com> opined thusly:

>Yes, but it IS important to note that for the situation in
>question - running a complete *cable assembly* through
>the ferrite - it does this ONLY as seen by the common-
>mode currents. It does NOT place an inductance/resistance
>in series with every conductor in the cable. If it did, placing
>a ferrite around a video cable, for instance, would instantly
>destroy that cable's ability to carry high-frequency video.

I'm not sure about that. We generally wind a few turns of TV feed-coax
around a ferrite ring in order to fashion a simple but effective
high-pass filter. This has nothing to do with unbalanced currents, but
rather to do with permitting the unfettered delivery of upper-UHF TV
signals whilst blocking the main causes of TV interference: high-power
HF transmissions on the amateur bands between 2Mhz-30Mhz.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

1992. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 21:30:10 UTC
From: la8ak.xnd@online.no
Message-ID: <3e71313f.293040715@news.online.no>
Source record: 36944
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

On 13 Mar 2003 16:43:22 GMT, john@Neopha.44in88.net (John Todd) wrote:

>On Wed, 12 Mar 2003 23:18:47 -0000, Richard
> <nearlynews_email@ntlworld.com> wrote:
>>
>>"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
>>news:v6v6juoid5q4d1@corp.supernews.com...
>(SNIP)
>>
>>Talking to a xtal manufacturer who can give you his xtal
>>parameters and who knows likely xtal parameters that will do the
>>job could be very important.
>>
>>Alternatively, you just order some xtals of the correct frequency
>>and hope the filter turns out okay.
>>
>>Rich.
>>
>
> I feel I must add, don't be tempted to order "rush" crystals!
>A good "grinder" will age the crystals, then correct the frequency;
>with rush units, as soon as they hit the mark, they're shipped,
>and _you_ get to deal with the ageing.
>
I feel I must add, I don't know how much the poster knows about xtals,
but many amateurs don't have the faintest idea about xtals and order
to wrong specifications. Many manufacturers don't understand all
specifications and so you must be careful where you buy xtals.

Remember the old Kenwood xtals were 40pF loading and some rigs even
used series res. xtals with capacitive load

I sent a so-called rubber xtal to the Norwegian Mining to be measured,
and he claimed it was just an ordinary xtal for 15.7MHz, so he could
deliver a similar 10.7MHz xtal, but the problem was that while the
15.7MHz xtal could be pulled +/-20kHz, the 10.7MHz xtal could only be
moved -4kHz, and I had to specify 10.7025khz series - zero load xtal
to get something which worked, but not optimum

73
Jan-Martin
http://home.online.no/~la8ak/
--
remove ,xnd to reply

1993. Re: Re-radiating RF from a ferrite bead

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:00:01 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <EjadnfZ-OaFBze-jXTWcpQ@comcast.com>
Source record: 36946
Cross-posted to: sci.electronics.design,sci.electronics.misc,sci.electronics.repair,rec.radio.amateur.homebrew

> I'm not sure about that. We generally wind a few turns of TV feed-coax
> around a ferrite ring in order to fashion a simple but effective
> high-pass filter. This has nothing to do with unbalanced currents, but
> rather to do with permitting the unfettered delivery of upper-UHF TV
> signals whilst blocking the main causes of TV interference: high-power
> HF transmissions on the amateur bands between 2Mhz-30Mhz.

A shielded cable would continue to work just fine.
A twinlead cable would definitely have a problem.

1994. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:06:41 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4tjn7$23vp4v$1@ID-150848.news.dfncis.de>
Source record: 36947
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e71313f.293040715@news.online.no...
> On 13 Mar 2003 16:43:22 GMT, john@Neopha.44in88.net (John Todd)
wrote:

> I feel I must add, I don't know how much the poster knows about
xtals,
> but many amateurs don't have the faintest idea about xtals and
order
> to wrong specifications. Many manufacturers don't understand
all
> specifications and so you must be careful where you buy xtals.

Correct me if I am wrong, but I think most articles on building xtal filters do not go into detail about the methodolgy of building a xtal filter involving specifying xtal specs to a manufacturer. The common methodology is pick some cheap xtals, build a circuit, try to get the kind of filter you are after by altering capacitors and input/output impedances. Not the best way to make a filter with specs you are aiming for perhaps, but the methodolgy has it's merits, and there is literature on how to proceed.. But the orther way, of designing a filter with software and proceeding from thereon, proceedings involving xtal specs and manufacturers, there is less information about methodology.

Any xtal manufacturers want to add their 2 cents?

1995. Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:25:08 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E7256C4.BDC53A4C@osite.com.br>
Source record: 36948

Guys...

I've found a bargain on gel batteries.
They are about USD 0.85, however they are being sold "as
is".
There are 6 12V batteries of 7Ah capacity, but one of them
have a crack in the bottom.
I gave them a quick glance, but they seem to be stuffed in
the bottom, but these protuberances are scratched.
There is also some solder over the terminals.

The questions:
How can assure myself that they will be useable?
What things do I have to check the batteries before I buy?

I know if they are just discharged, there must be something
around 10 V between the terminals. But I don't know for how
long they were stored.
I have no way to test charge them before I buy.
--
Paulo E.P. Marcondes
pepm@osite.com.br

1996. Introduction to Radio Frequency design errors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:42:04 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E725ABB.1DC6077E@visi.com>
Source record: 36949

Hi gang,
It has been a while since I have played with the level of math in this book, but I am having a devil of a time getting some of the formulas to work from this text.

For instance on p 15, formula 1.4-3 should allow one to plot Fig 1.12. Or, in Fig 1.12 there appears to be a rewritten version of formula 1.4-3, but I can't get either to duplicate the graph.

Is there anyone in this group that would be willing to help me see what I'm doing wrong, or, if there are some errors in this book is there an errata sheet available?

Thanks for the help!
72
Bob WB0POQ

P.S. My copy is copyright 1994 ISBN 0-87259-492-0

1997. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:44:43 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <8om47vcmqah4k1a01crk4b3oddqq7g6ptn@4ax.com>
Source record: 36950
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

My elmer taught me to use Ipana or Colgate, but otherwise the technique was the same.

The only problem is those damned FT-243 holder springs would bounce around all over the room if you didn't keep a tight finger on the holder when you took them apart.

Jim

Jim Thompson <Jim-T@analog_innovations.com>
shared these priceless pearls of wisdom:

->
->Gee, I date from the "remove crystal from holder and lap with Boraxo
->on a glass plate" era ;-)
->
-> ...Jim Thompson

1998. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 22:57:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v74ni2prqitn8e@corp.supernews.com>
Source record: 36951
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Richard wrote:
>
> Correct me if I am wrong, but I think most articles on building
> xtal filters do not go into detail about the methodolgy of
> building a xtal filter involving specifying xtal specs to a
> manufacturer. The common methodology is pick some cheap xtals,
> build a circuit, try to get the kind of filter you are after by
> altering capacitors and input/output impedances. Not the best
> way to make a filter with specs you are aiming for perhaps, but
> the methodolgy has it's merits, and there is literature on how to
> proceed.. But the orther way, of designing a filter with software
> and proceeding from thereon, proceedings involving xtal specs and
> manufacturers, there is less information about methodology.
>
> Any xtal manufacturers want to add their 2 cents?

Wes Hayward, W7ZOI wrote several articles about crystal ladder filter design which were published in QST and, I believe, QEX. His procedure was to select inexpensive crystals for certain characteristics. At least one article described some simple homebrew test fixtures to do the testing. You'll also find this information, including test fixtures, in Chapter 3 of his new book _Experimental Methods in RF Design_ (ARRL). There's no reason you couldn't order the crystals directly to specification using the criteria in the articles or book, rather than selecting them from a sizeable quantity of cheap crystals, if expense isn't a problem.

Lattice filters are a different critter, and I don't know what's been done in the amateur community with respect to lattice filter design.

Roy Lewallen, W7EL

1999. Re: Re-radiating RF from a ferrite bead

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 23:10:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v74oa9a9rjg682@corp.supernews.com>
Source record: 36952
Cross-posted to: sci.electronics.design,sci.electronics.misc,sci.electronics.repair,rec.radio.amateur.homebrew

Nospamplease is correct. (And with a name like that, he's probably a good fighter, too.)

Winding the coax through the ferrite core presents a high impedance to current on the outside of the cable (common mode current), but has no effect on the signals inside (differential mode). If it suppresses HF signals, it's because the HF signals are traveling along the outside of the line, not the inside. This is a common way for an interfering signal to get into equipment, and the common-mode choke you've created is a common way to cure the problem.

The common-mode choke you've created is a lowpass, not highpass, filter for the current on the outside of the cable. The types of ferrites typically used for this application have significant impedance as low as the HF range.

Roy Lewallen, W7EL

Paul Burridge wrote:
> On Fri, 14 Mar 2003 10:36:12 -0700, "Bob Myers"
> <nospamplease@addressinvalid.com> opined thusly:
>
>
>>Yes, but it IS important to note that for the situation in
>>question - running a complete *cable assembly* through
>>the ferrite - it does this ONLY as seen by the common-
>>mode currents. It does NOT place an inductance/resistance
>>in series with every conductor in the cable. If it did, placing
>>a ferrite around a video cable, for instance, would instantly
>>destroy that cable's ability to carry high-frequency video.
>
>
> I'm not sure about that. We generally wind a few turns of TV feed-coax
> around a ferrite ring in order to fashion a simple but effective
> high-pass filter. This has nothing to do with unbalanced currents, but
> rather to do with permitting the unfettered delivery of upper-UHF TV
> signals whilst blocking the main causes of TV interference: high-power
> HF transmissions on the amateur bands between 2Mhz-30Mhz.

2000. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 23:19:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v74osdcdikqof8@corp.supernews.com>
Source record: 36953

They might not be a bargain at all, even if they're free -- unless you
have a free and convenient way of disposing of them.

First, hardly any batteries that hams like to call "gel cells" have
gelled electrolyte. It's generally liquid sulphuric acid absorbed into
separator pads. Some have free liquid. A cracked one could leak H2SO4.

Next, if the batteries are discharged to 10 volts at no load after
standing, it's likely you won't be able to charge them again. Allowing a
lead acid cell to discharge too far is fatal.

Finally, if the batteries were pulled from float service, the chances
are very good that their capacity is severely reduced.

The only way you can tell whether they're usable is to fully charge them
(if possible), then discharge at a known rate and measure how long it takes.

Tell you what -- I'll bet you six bucks that the total usable capacity
of the lot of them doesn't exceed 7 Ah.

Roy Lewallen, W7EL

Paulo Marcondes wrote:
> Guys...
>
> I've found a bargain on gel batteries.
> They are about USD 0.85, however they are being sold "as
> is".
> There are 6 12V batteries of 7Ah capacity, but one of them
> have a crack in the bottom.
> I gave them a quick glance, but they seem to be stuffed in
> the bottom, but these protuberances are scratched.
> There is also some solder over the terminals.
>
> The questions:
> How can assure myself that they will be useable?
> What things do I have to check the batteries before I buy?
>
> I know if they are just discharged, there must be something
> around 10 V between the terminals. But I don't know for how
> long they were stored.
> I have no way to test charge them before I buy.

2001. Re: VFO offset when receiving and transmitting.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 23:28:32 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4tohv$7rg$1@slb6.atl.mindspring.net>
Source record: 36954

In hamspeak that is called 'split'. Happens all the time when DXing on 40 phone. Rx low and TX high. However this is normally done with two seperate VFO's so to speak.

Dan/W4NTI

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b4t8r5$23sisd$1@ID-150848.news.dfncis.de...
> TX and RX seperates. Is it realistic to have a VFO switch
> between two output frequencies when operating? That is output
> F1 when receiving, output F2 when transmitting. I suppose it
> could be, but may not work well with break-in CW.
>

2002. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-14 23:34:23 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E7266FF.D3F6A185@osite.com.br>
Source record: 36955

Roy Lewallen wrote:
>
> They might not be a bargain at all, even if they're free -- unless you
> have a free and convenient way of disposing of them.

<snip>

> Tell you what -- I'll bet you six bucks that the total usable capacity
> of the lot of them doesn't exceed 7 Ah.

Many thanks Roy,
I have thought that they may more of a problem than
anything.
Your post enligthened me a bit more.

Probably used batteries are not wotrh the hassle, isn't it?

Thanks again
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2003. Re: Great new book for tinkerers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 01:37:51 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <Ptvca.5728$ja4.403300@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36956

Actually, I happened to be looking through the last several months' worth of QST at the library recently....and they had the first several of a series of tutorial articles on the basics of bipolar transistor amplifier circuits (common emitter, emitter follower, etc.) which I thought were quite nicely done.

But in general you are certainly correct about the level of explanations as specific technology gets to be more commonplace.

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message news:b4erofgpk1@freenet9.carleton.ca...
> "Bert Herald" (bert.herald@worldnet.att.net) writes:
> > I think I have the "Solid State Design" book -- is it the one with what
> > looks like a bunch of dominos on the cover? Kind of a brown cover and
> > paperback? If that's the one, then I didn't feel like it was all that much
> > better. Frankly I'm not sure the kind of book I'm looking for exists, from
> > what I've seen. I'm looking for something which goes through lengthy
> > explanations on various oscillator circuits, including why values are chosen
> > as they are, what is critical and what isn't, and some circuit analysis and
> > simulations, where they talk about impedances and so forth. For me a book
> > which spends more time examining the fundamentals like that would be better
> > than having lots of complicated circuits thrown at me. If you don't have a
> > solid grasp on the fundamentals, it is difficult to add layers of
> > complexity.
> >
> One thing that happens is that when something becomes commonplace,
> the explanations tend to go away. A forty to fifty year old ARRL
> single sideband book covers the basics of that mode better than many
> of the handbooks in more recent decades. Back then, they were explaining
> it to everyone, and later material is derived from that. (Really recent
> ARRL Handbooks seem to do a more comprehensive job of dealing with
> SSB, but I still say the early articles are the best.)
>
> Some of the better material of the type you seem to be looking for
> have appeared in magazines, rather than hobby level books. Back in
> 1974, or 75, QST ran a series "Learning to Work with Semiconductors"
> that went into explaning what the different components were for,
> including basic calculations. For a while, it was reprinted as

> a booklet, but it never made it into a real ARRL book (though
> tiny snippets seem to be in "Solid State Design...". It was
> a time when calculators were just becoming available cheap,
> and that gave permission to show the calculations for determining
> component values.
>
> I can think of some other articles that covered more specific
> things, and tended to give a better part by part description
> than many books and construction articles.
>
> I don't know if they are still in print, and while I would
> describe them as being aimed at a lower technical level,
> they don't give that blow by blow description that you want.
> "W1FB's Design Notebook" (1990) and "W1FB's QRP Notebook" (1991)
> both by Doug DeMaw and published by the ARRL. The good part
> was they were both relatively cheap; each were under twenty dollars
> here in Canada. But I suspect there is a lot of overlap, in
> area if not material, with that new ARRL book you bought.
>
> Often, the choice is a hobby book that is mostly construction
> articles, or text books that are more theory based. There is
> very little middle ground, that covers practical component selection.
> I think I've picked it up through osmosis, looking at construction
> articles over the years. If it's this frequency range, use
> this value of bypass capacitor, if it's that range, use that value.
>
> Michael VE2BVW
>
>
>

2004. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 06:55:12 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E72B24C.D3349858@att.net>
Source record: 36957

I'd check the voltage on each. Don't waste your time on any battery
that doesn't show 10-11 volts,
it will have at least one shorted cell and will be unusable.

Dick

Paulo Marcondes wrote:

> Guys...
>
> I've found a bargain on gel batteries.
> They are about USD 0.85, however they are being sold "as
> is".
> There are 6 12V batteries of 7Ah capacity, but one of them
> have a crack in the bottom.
> I gave them a quick glance, but they seem to be stuffed in
> the bottom, but these protuberances are scratched.
> There is also some solder over the terminals.
>
> The questions:
> How can assure myself that they will be useable?
> What things do I have to check the batteries before I buy?
>
> I know if they are just discharged, there must be something
> around 10 V between the terminals. But I don't know for how
> long they were stored.
> I have no way to test charge them before I buy.
> --
> Paulo E.P. Marcondes
> pepm@osite.com.br

2005. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 07:17:10 UTC
From: alskdjfhg72000@yahoo.com
Message-ID: <3c7e4e8c.0303142317.761f0dc4@posting.google.com>
Source record: 36958

Those are interesting links to the carbide drills, Tom; I'll be sure to keep them handy.

One thing that I neglected to mention in a previous post is that after the film is developed, it needs to be rinsed off in water (preferrably distilled, but whatever is available). Afterwards, it needs to be placed in the oven again for 10 minutes at 200 deg F. This dries out the film from the developing process, and makes it more durable for etching.

Best Regards,

Sam B.

2006. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 08:00:10 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <e4Bca.20470$Ty5.1638905@news0.telusplanet.net>
Source record: 36959

Dick

the name seems to fit, take a minute and read the articles, they're not as slanted as you claim

qlt

"Dick Carroll" <dickc58@att.net> wrote in message news:3E715BA2.F2661CD8@att.net...
>
>
> Gerry MacDonald wrote:
>
> > With help like this, I can see why this hobby is in such a bad state.
> > I was feel bad for anybody asking honest questions in this NG.
> > To the gentleman asking about grounding, try theses links:
> >
> > http://www.polyphaser.com/ppc_PEN1016.asp
> >
> > http://www.polyphaser.com/ppc_pen_home.asp
>
> So what you'll get there is one commercial vendor's viewpoint on
> grounding.
> Surely it wouldn't be slanted toward their product would it?
>
> Dick
>

2007. Final comment on FR50B FL50B issues (At least for a week)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 13:26:06 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b4v9i2$21m49h$1@ID-150848.news.dfncis.de>
Source record: 36961

Thanks for those who have commented on my VFO, IF and xtal enquiries in relation to FR50B and FL50B modifications. I've copied responses to folders to peruse more fully later.

Where the TX is VXO controlled it does dawn on me now that a wideband VXO in the RX might well be sufficient along with a digital frequency counter. Or, where one VFO is used to control TX and RX the obvious solution is to use a xtal oscillator and mixer, sending a different VFO signal to RX from TX, thus allowing the RX IF SSB filter to be different from the TX SSB filter. Thus opening up the way to select RX IF on the basis of cheap readily available xtals, or surplus commercial xtal filters.

I think there is need I think for an article on xtal filter design to cover issues not raised in the articles available at present. I might attend to that.

73 Rich.

2008. swr sense head design

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 13:41:27 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047735682.310891@auth2.dns.griffin.net.uk>
Source record: 36962

building 600w vhf amp..looking for a design for a swr protection sense head to take 600w...no problem with the shut down crt, but any ideas on the bridge that will take the power..is for 70-144mhz.....

thanks G0ZEN simon

2009. Re: swr sense head design

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 14:00:08 UTC
From: jgboyles@aol.com
Message-ID: <20030315090008.00329.00000070@mb-cf.aol.com>
Source record: 36963

>building 600w vhf amp..looking for a design for a swr protection sense head
>to take 600w.

The VHF/UHF DX book (RSGB) has a Breune bridge on page 12-17 that ought to work. Make sure the caps. have a high enough voltage rating to handle 600 watts.
I built a 1200 watt solid state HF amp and used the design Ameritron used on their ALS 600 amp. It combines the rf sense, ALC, and pep watt meter. Seems to work well. You can download the schematic from Ameritron.
73 Gary N4AST

2010. Re: Beam antenna question (straight vs. angled elements)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 14:37:43 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <k5mcnd-Sa4Uqp-6jXTWcqg@comcast.com>
Source record: 36964

Wow. I've seldom seen such a helpful idea presented so concisely. I can use this!

Thanks, Roy. And thanks, Myron, for asking.

Tom, N3IJ

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v74fs937ud3nb7@corp.supernews.com...
> None of us have been licensed long enough that we know everything.
>
> TV antenna elements are sometimes bent into a V shape to take advantage
> of the fact that the higher VHF channels are at about three times the
> frequency of the lower channels. By bending an element, they get a
> rudimentary V beam and associated gain at the higher channels while the
> bending has little effect on the lower channels.
>
> I've done the same trick with a 40 meter dipole. A straight 40 meter
> dipole has a cloverleaf pattern on 15 meters. But by bending each half
> 30 degrees, the lobes line up on 15 meters to make a bidirectional
> pattern with a bit of gain. The bending doesn't have much effect on the
> pattern at 40 meters. Naturally, aligning the lobes, and the associated
> gain, is useless at best if the lobes don't end up pointing in the
> directions you want to communicate.
>
> Roy Lewallen, W7EL
>
> mcalhoun@ksu.edu wrote:
> > Yesterday I removed a TV antenna from the tower of a recently-deceased
> > local ham (I bought the tower), and since the antenna is in good-enough
> > shape to revamp into a two-meter beam, I'm just curious: why do some TV
> > antennas have elements which stick out at 90-degree angles from the boom
> > and others have elements which "point forward" at about 45-degree angles?
> > Is this for impedance matching (both kinds are usually "fed" with 300-ohm
> > twin-lead)?
> >
> > Yes, I've been licensed long enough that I should know everything, but
> > since I don't, I'm asking.
> >
> > --Myron, W0PBV.
>

2011. Re: SMPS Xfmr design equations

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 14:45:52 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b4v731$42c$1@nyytiset.pp.htv.fi>
Source record: 36960

Hi,

"john walton" <jdwalton@comcast.net> schrieb im Newsbeitrag
news:NRSdnQs1wuKhSuyjXTWcpQ@comcast.com...
> I took the design equations from the Linear Technology LT1683
Push-Pull SMPS
> driver and put them up in spreadsheet form at
www.tech-diy.com/smps.htm
>
> Comments and suggestions are welcome. The recent article in QEX got
me
> going!

Looks nice! :)

Some points:

- "N" is the (2 x pri):(1 x sec) turns ratio of the center tapped push
pull transformer, i.e., not the number of turns.

- The primary and secondary inductance may be calculated after you have
already chosen a xfmr core, and know t.ex. the A_L value for that core.
There are formulas
(http://www.hut.fi/~jwagner/tesla/SSTC/general-sstc-notes-recreading.htm
or http://www.hut.fi/~jwagner/tesla/SSTC/SSTC-Designer.xls (my latter
excel sheet is a bit flawed at some points, tho)) for calculating the
minimum number of pri turns which prevent saturating the core. From
these values you can the continue and estimate the pri & sec
inductances.

- the ESR numbers for the caps - an ESR of 5 ohms sounds a bit drastic,
doesn't it? ;-) Something like 0,005 Ohm or less is more realistic. As
a bonus, the values for C(in) and C(out) capacitances will be positive
then. :-)

Have fun!

And btw, don't concentrate too much maths! :o) (it's all just for
reference, and when you build the circuit, you probably will end up
having to make some extra changes to the pre calculated values in any
case, so there's no reason to loose all hope waist-deep in all that
maths... ;-)

cheers,

- Jan

2012. "Kitchin" books?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 16:10:47 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <bgIca.9822$S%3.498775@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36965

There was a reply to a post I made awhile back where someone recommended books by a guy named Kitchin, which had material on oscillator (or maybe receiver/transmitter) design I believe. Unfortunatly I can't find the post now. Can someone tell me the title and the full author's name, and whether these are still in print?

Thanks,
Bert WF7I

2013. Re: "Kitchin" books?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 16:20:49 UTC
From: Ken Knox <knox_k@operamail.com>
Message-ID: <oprl23ozh2kx6x2g@news.midmaine.com>
Source record: 36966

On Sat, 15 Mar 2003 16:10:47 GMT, Bert Herald
<bert.herald@worldnet.att.net> wrote:

> There was a reply to a post I made awhile back where someone recommended
> books by a guy named Kitchin, which had material on oscillator (or maybe
> receiver/transmitter) design I believe. Unfortunatly I can't find the
> post
> now. Can someone tell me the title and the full author's name, and
> whether
> these are still in print?
>
> Thanks,
> Bert WF7I
>

Perhaps what you're looking for is here??:

http://www.e-insite.net/ednmag/archives/1996/101096/21di_02.htm

--
Ken Knox
N1JRO

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2014. Re: "Kitchin" books?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 16:36:09 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b4vkppiag1@freenet9.carleton.ca>
Source record: 36968

"Bert Herald" (bert.herald@worldnet.att.net) writes:
> There was a reply to a post I made awhile back where someone recommended
> books by a guy named Kitchin, which had material on oscillator (or maybe
> receiver/transmitter) design I believe. Unfortunatly I can't find the post
> now. Can someone tell me the title and the full author's name, and whether
> these are still in print?
>
> Thanks,
> Bert WF7I
>
>
I mentioned him, so I suspect it was my post.

Charles Kitchin has not written any books, at least not that I know
of. He has written quite a bit about regen and superregen receivers.

From that post of mine from March 8th:

Someone suggested a one or two transistor receiver. That has
it's merits, since it won't cost you much in parts or effort.
I took it as a hint at a regenerative receiver, which has
the advantage of also showing you something about an oscillator,
since Armstrong basically discovered both at the same time.
In recent years, Charles Kitchin has written quite a bit about
regen receivers (and about superregen receivers too, but they
wouldn't be the best choice for shortwave).

Kitchin, Charles. "A Simple Regen Radio For Beginners", QST
magazine, Sept 2000, pp 61-64.

Kitchin, Charles. "High Performance Regenerative Receiver Design",
QEX magazine, Nov/Dec 1998, pp 24-36.

Kitchin, Charles. "An Ultra Simple W1AW Receiver", QST magazine.
May 1997, pp 34-35.

Kitchin, Charles. "Regenerative Receivers: Past And Present",
Communications Quarterly. Fall 1995, pp 7-26.

A similar article to that last one appeared in Electronics Now
for March 1994, "THe Lost Art of Regeneration".

One of his regen designs appeared in one or more ARRL Handbooks
a few years back (again, don't confuse it with one of his superregen
designs, that has appeared a couple of times in the Handbook).

He's had a few other articles on regen receivers in QST, most recently the September 2000 issue, on page 61.

You might look around the ARRL site, http://www.arrl.org to see if they've put one of his regen articles up there.

If you don't have any of the paper references (or know noone who does), do a websearch with <"charles kitchin" regen> as the searchwords, and you'll find material, either his own or variations on his work.

Just about any ARRL book is going to have some sort of simple receiver. What it will be depends on the era; 35 years ago it would have been a regen, thirty years ago a direct conversion receiver, then more recently a superhet.

Once you have a regen working, you could add a converter ahead of it, and get a basic superheterodyne receiver.

Michael VE2BVW

2015. Re: Introduction to Radio Frequency design errors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 16:41:38 UTC
From: Virgil Smith <lmcoyle@attbi.com>
Message-ID: <6JIca.114025$6b3.334123@rwcrnsc51.ops.asp.att.net>
Source record: 36967

"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3E725ABB.1DC6077E@visi.com...
> Hi gang,
> It has been a while since I have played with the level of math in this
> book, but I am having a devil of a time getting some of the formulas to
> work from this text.
>
> For instance on p 15, formula 1.4-3 should allow one to plot Fig
> 1.12. Or, in Fig 1.12 there appears to be a rewritten version of
> formula 1.4-3, but I can't get either to duplicate the graph.
>
> Is there anyone in this group that would be willing to help me see
> what I'm doing wrong, or, if there are some errors in this book is
> there an errata sheet available?
>
> Thanks for the help!
> 72
> Bob WB0POQ
>
> P.S. My copy is copyright 1994 ISBN 0-87259-492-0
>
>

That formula is OK. I was curious, so I typed it into MathCAD and
got the same results as are plotted in the book. Be aware that the
phase term theta (or omega*t) has to be expressed in radians,
even though it's plotted on a scale of degrees in the book.

2016. Re: Introduction to Radio Frequency design errors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 17:09:52 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000003f.0052d07c@btinternet.com>
Source record: 36969

Hi,

The use of '26' in the denominator of the exponential terms signifies that Vp should be specified in millivolts, i.e. 1, 10, 30, 100, etc., and not as 0.01V, 0.01V, 0.03V, 0.1V. This comes from the reduction of the expression q/kT in 1.4-1.

If you look at 1.4-3, you will see that at 180 degrees the sine term is zero, so the numerator equals one for all values of Vp at that angle and the expression reduces to 1/exp(Vp/26) which is very nearly equal to one for all small (i.e. millivolts) values of Vp.

Cheers - Joe

2017. Re: Introduction to Radio Frequency design errors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 17:12:02 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E735EE2.2DD327B8@visi.com>
Source record: 36970

Virgil Smith wrote:

>
>
> > For instance on p 15, formula 1.4-3 should allow one to plot Fig
> > 1.12. Or, in Fig 1.12 there appears to be a rewritten version of
> > formula 1.4-3, but I can't get either to duplicate the graph.
> >
> >
> >
>
> That formula is OK. I was curious, so I typed it into MathCAD and
> got the same results as are plotted in the book. Be aware that the
> phase term theta (or omega*t) has to be expressed in radians,
> even though it's plotted on a scale of degrees in the book.

Yup, I figured that out late last night! ;) I knew I was missing
something. Thanks for the post.

Bob

2018. 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 18:13:54 UTC
From: Ale55andro <DearSpammerTakeThisNowww@tim.it>
Message-ID: <29r67vkmh7t5ggtl1mstd73gnlltn75sru@4ax.com>
Source record: 36971

I'm really attracted from the very low price...

http://smallwonderlabs.com/Rockmite.htm

How it performs?
Bye

2019. Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 20:23:52 UTC
From: Carl Clawson <carlclawson@earthlink.net>
Message-ID: <sZLca.2516$jA2.234669@newsread2.prod.itd.earthlink.net>
Source record: 36972

Is there a good reference for oscillator circuit characteristics that tells you how to derive crystal load capacitance specs? The usual ham books don't seem to help much.

Many construction articles don't give you a clue, and when they do I usually don't come up with the same number when I analyze the circuit.

Here's the most recent one that stumped me:

The Tuna Tin 2 schematic can be found at http://www.njqrp.org/tuna/tuna_schematic.jpg. The crystal is specified for 30 pF according to the QST article (March 2000). After staring at it for a while and looking up the Pierce oscillator in a few books, I realized that 30 pF is approximately the B-E capacitance of Q1, which is in series with C2 (100 pF) across the crystal.

But there's another path from Q1's base to ground -- through the B-E resistance and C1. This path should be only a few tens of ohms and swamp the B-E capacitance, which is about 750 ohms. So wouldn't the parallel capacitance across the crystal be closer to C2? Or even more, as C4 is in parallel with C2 during at the part of the cycle where Q2 is conducting?

Is it possible that it just isn't that critical (what's a kHz or two between friends) and I'm being overly persnickety? I just have this compulsion to try to understand what I'm doing...I find that it usually helps.

Cheers, and TIA
73, Carl WS7L

2020. TRW tr PT8726 spec..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 20:31:56 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1047760376.207285@auth2.dns.griffin.net.uk>
Source record: 36973

looking for spec on TRW device PT8726A/B..ie ft.po.V ce..
thanks
G0ZEN (in dire need of old POWER transistor equivalent book)

2021. Re: "Kitchin" books?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 21:11:12 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <QFMca.7362$ja4.506863@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36974

Thanks Michael. I think you were indeed the one who posted the info I was thinking of.
73, Bert

2022. Re: "Kitchin" books?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 21:14:20 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <MIMca.7366$ja4.503818@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36975

```
Interesting link Ken. Thanks,
Bert
"Ken Knox" <knox_k@operamail.com> wrote in message
news:oprl23ozh2kx6x2g@news.midmaine.com...
> On Sat, 15 Mar 2003 16:10:47 GMT, Bert Herald
> <bert.herald@worldnet.att.net> wrote:
>
> > There was a reply to a post I made awhile back where someone recommended
> > books by a guy named Kitchin, which had material on oscillator (or maybe
> > receiver/transmitter) design I believe. Unfortunatly I can't find the
> > post
> > now. Can someone tell me the title and the full author's name, and
> > whether
> > these are still in print?
> >
> > Thanks,
> > Bert WF7I
> >
>
> Perhaps what you're looking for is here??:
>
> http://www.e-insite.net/ednmag/archives/1996/101096/21di_02.htm
>
> --
> Ken Knox
> N1JRO
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

2023. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 21:23:16 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <OIMca.40783$Dp.11612@fe01.atl2.webusenet.com>
Source record: 36976

It is featured in the April QST.

Looks good to me. I might get one at Dayton if I can wait that long!

Jim
N8EE

"Ale55andro" <DearSpammerTakeThisNowww@tim.it> wrote in message
news:29r67vkmh7t5ggtl1mstd73gnlltn75sru@4ax.com...
> I'm really attracted from the very low price...
>
> http://smallwonderlabs.com/Rockmite.htm
>
> How it performs?
> Bye

2024. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 21:29:19 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e739b49@news.alphalink.com.au>
Source record: 36977

There's nothing wrong with the kit itself, but any crystal-controlled QRP rig is little more than an toy that's no fun to use once the novelty of making phone calls to prearrange contacts wears off!

Read more at: http://home.alphalink.com.au/~parkerp/qrpequ.htm
(start half way down page)

73, Peter VK3YE

"JLB" <IHateSpam@nospam.net> wrote in message
news:OIMca.40783$Dp.11612@fe01.atl2.webusenet.com...
> It is featured in the April QST.
>
> Looks good to me. I might get one at Dayton if I can wait that long!
>
> Jim
> N8EE
>
>
> "Ale55andro" <DearSpammerTakeThisNowww@tim.it> wrote in message
> news:29r67vkmh7t5ggtl1mstd73gnlltn75sru@4ax.com...
> > I'm really attracted from the very low price...
> >
> > http://smallwonderlabs.com/Rockmite.htm
> >
> > How it performs?
> > Bye
>
>
>

2025. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 22:12:48 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E73A560.8070407@bellsouth.net>
Source record: 36978
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

A number of crystal makers are now selling programable crystals that
can be user programed like eproms. Infact, they sell a programmer that
you can use to set the frequency yourself. The crystals are cheap,
about $5-10 or so
but the programmer is about $2000. The crystals can be programmed twice
only.
I wonder how these things work.

>>Then, when the customer names a frequency, you edge grind it
>>well away from the conductors to bring it up to frequency and
>>then bang the lid on. All the aging in the conductors
>>and the mounts having already happened and all that double
>>handling cost is saved.
>>
>>Am I out of date already?
>>
>
> Seems like a practical way to me.
>
> Semi-custom with a little tweaking is going to be less expensive than
> total custom work. Doing the bulk of the work ahead of time makes
> sense as well, to allow quick turnaround.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

2026. Re: Anyone have experiece of ordering custom made crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 22:22:35 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E73A7AB.3030107@bellsouth.net>
Source record: 36979
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,uk.radio.amateur

Michael Black wrote:
> "Michael A. Terrell" (mike.terrell@earthlink.net) writes:
>
>> You can use a single crystal oscillator with two buffers to feed two
>>mixers to move the IF to a convenient frequency, filter it, then move it
>>back. It requires good shielding, but it will work.
>
>
> Since it adds two mixers (more things to overload) in the signal path,
> another oscillator, and all the various byproducts of the mixing, I'd
> only do that as a last extent.
>
> And in this particular case, I wouldn't even suggest it, because it's
> going to send things on yet another tangent (and thread) when some
> of the basic issues have still not been dealt with.
>
> Michael VE2BVW
>
>

The Drake 4 line receiver and/ or the 2C receiver used that exact method to create the passband tuning. The older drake receivers used tunable 50khz circuits.

2027. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 22:30:56 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b509is$v16$1@slb2.atl.mindspring.net>
Source record: 36980

Carl:

Have a look here: http://www.corningfrequency.com/

--
Peter K1PO
Indialantic By-the-Sea, FL.

"Carl Clawson" <carlclawson@earthlink.net> wrote in message
news:sZLca.2516$jA2.234669@newsread2.prod.itd.earthlink.net...
> Is there a good reference for oscillatohttp://www.corningfrequency.com/r
circuit characteristics that tells
> you how to derive crystal load capacitance specs? The usual ham books
don't
> seem to help much.
>
> Many construction articles don't give you a clue, and when they do I
usually
> don't come up with the same number when I analyze the circuit.
>
> Here's the most recent one that stumped me:
>
> The Tuna Tin 2 schematic can be found at
> http://www.njqrp.org/tuna/tuna_schematic.jpg. The crystal is specified for
> 30 pF according to the QST article (March 2000). After staring at it for a
> while and looking up the Pierce oscillator in a few books, I realized that
> 30 pF is approximately the B-E capacitance of Q1, which is in series with
C2
> (100 pF) across the crystal.
>
> But there's another path from Q1's base to ground -- through the B-E
> resistance and C1. This path should be only a few tens of ohms and swamp
the
> B-E capacitance, which is about 750 ohms. So wouldn't the parallel
> capacitance across the crystal be closer to C2? Or even more, as C4 is in
> parallel with C2 during at the part of the cycle where Q2 is conducting?
>
> Is it possible that it just isn't that critical (what's a kHz or two
between
> friends) and I'm being overly persnickety? I just have this compulsion to
> try to understand what I'm doing...I find that it usually helps.
>
> Cheers, and TIA
> 73, Carl WS7L
>

>

2028. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 22:49:34 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000040.00425f26@btinternet.com>
Source record: 36981

Hi,

I believe you will find that the crystal is not strictly running at parallel resonance in that circuit and so its shunt capacitance is only marginally involved. Although W1RFI specifies a 30pF rock, I wouldn't think that it matters that much. The collector load is inductive at 7MHz meaning that, together with the 180-ish degree shift through Q1, there is a need for a little more inductance to get 360 around the loop. The crystal should provide this by working on the low side of parallel resonance.

Cheers - Joe

2029. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-15 23:23:39 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <kfd77v8mej3kjdpt38p953ohv5vmp7rf9d@4ax.com>
Source record: 36982

On Sat, 15 Mar 2003 22:49:34 GMT, Joe McElvenney
<ximac@btinternet.com> wrote:

|Hi,
|
| I believe you will find that the crystal is not strictly
|running at parallel resonance in that circuit and so its shunt
|capacitance is only marginally involved. Although W1RFI specifies
|a 30pF rock, I wouldn't think that it matters that much. The
|collector load is inductive at 7MHz meaning that, together with
|the 180-ish degree shift through Q1, there is a need for a little
|more inductance to get 360 around the loop. The crystal should
|provide this by working on the low side of parallel resonance.

Strictly speaking, parallel resonance is only a crystal parameter. It
is the frequency at which the electrode and package capacitances
resonate with the motional inductance to offer maximum impedance.

Fp = 1 / (2 *pi * sqrt((L1 * C1 * Co) / (C1 + Co)))

where:

L1 = motional inductance

C1 = motional capacitance

Co = shunt capacitance

Oscillators that use the crystal in a "parallel" mode are actually
using the crystal as an inductor. You can look at the crystal +
capacitors as a pi network that delivers both the necessary phase
shift and some impdance change from collector to base.

The "load" capacitance is the value at which the frequency is
specified. Crystals that are specified as "parallel" mode are often
tested with the load capacitance in series with the crystal with the
composite measured as a "series" resonant circuit.

A "parallel" mode crystal specified at a particular load capacitance
can be used in a series mode oscillator (on frequency) by installing
the speciified capacitance in series with the crystal.

In the subject circuit, using the base capacitance is a bit iffy but
probable okay, considering the application.

2030. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 00:44:43 UTC
From: Don <mavier@cablespeed.com>
Message-ID: <v77ihj81ag3na9@corp.supernews.com>
Source record: 36983
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

You might want to try SmartDraw. They have a trial version.
I've played with it a little and seems it would fit your criteria.

Don

> Hi Everyone,
>
> I've used turbo cad some, but my version is very old (ver 3). The old
> version does not do electronic schematic drawing.
<SNIP>

2031. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 01:29:30 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0303151729.6f665e3c@posting.google.com>
Source record: 36984

I have a 40M Rockmite and have had lots of fun with it. There is a lot of activity on the QRP frequency so it is pretty easy to make contacts even with an average antenna.

The PIC processor in the Rockmite provides a keyer but also solves a couple of problems that simple direct conversion xcvrs normally have; it provides a side tone and a 700hz receiver offset. The only problem I had with mine was BCI from a local AM station. There are various simple mods available to solve that problem if you experience it. Have a look at "The Rockmite-Files" at http://www.radioactivehams.com/~n0rc/rm/ . There you will find many pictures of completed Rockmites and lots of mods for it. I apologize if all this is redundant, I haven't received my QST yet so I don't know what is in the article.
JBH

2032. Re: source for photo resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 01:36:03 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0303151736.5d77acdb@posting.google.com>
Source record: 36985

Thanks Sam for all the information about using the film. I hope I will be able to get some film and try it out soon.

Concerning the Positive resist spray, I checked this out a little yesterday. I found a spray can of positive resist in the GC Electronics on-line catalog so I called them to find out a little more about it. They told me that the product is currently out of production. They are re-formulating it to try and solve some problem and they don't know when it will be available again. I'm thinking maybe that means never.
JBH

2033. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 01:48:21 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E73D7E5.9020404@bellsouth.net>
Source record: 36986
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

Don wrote:
> You might want to try SmartDraw. They have a trial version.
> I've played with it a little and seems it would fit your criteria.
>
> Don
>
>
>
>>Hi Everyone,
>>
>>I've used turbo cad some, but my version is very old (ver 3). The old
>>version does not do electronic schematic drawing.
>
> <SNIP>
>
>

If you run Linux, try gschem

2034. Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 01:50:17 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E73D859.9090408@bellsouth.net>
Source record: 36987

I'm watching the movie Frequency on network tv. You'd think the prop men
on the movies would know the difference between a receiver and a
transceiver.
The ham rig being shown is an old Heath SB301. No way to hook up a
microphone
to that, it wouldn't have been any more trouble for them to dig up an
SB101 now would it?

2035. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 02:17:21 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <R8Rca.7948$ja4.536785@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36988

I see Frank is causing trouble on this ng too...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Dick Carroll" <dickc58@att.net> wrote in message
news:3E715B3E.1A5DCE26@att.net...
>
>
> Frank Gilliland wrote:
>
> > In <Xns933CAA360D168pookster@216.168.3.50>, "Bill, W7TI"
> > <jamspam@upyours.now> wrote:
> >
> > >Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote in
> > >news:uojv6v031m1bd0kv3jsjkugub0kili8tn2@4ax.com:
> > >
> > >> Anybody who didn't learn that much while studying the
> > >> Radio Amateur's Handbook (or other appropriate educational resource)
> > >> for his/her license shouldn't have passed the test.
> > >
> > >____
> > >
> > >When you get to be in charge of the tests, you can flunk anyone who
> > >doesn't understand grounds. In the meantime, I suspect this gentleman,
> > >like a lot of us, thought he *knew* about grounds and later on realized
> > >there was still some more to learn.
> >
> > Speculation.
> >
> > > Perhaps we should just take him out
> > >back and shoot him?
> >
> > If I had come to the same conclusion I wouldn't have provided the link
> > to the ARRL site.
> >
> > >In any event, please cork the put downs for some one who is asking
honest
> > >questions and trying to learn something. Better yet, focus on your
> > >fellow CBers. Now there's a target-rich environment!

> >
> > That's the very same holier-than-thou attitude that sours my taste
> > buds whenever I get the appetite for a ham license. Perhaps you should
> > stop by rec.radio.cb sometime -- despite the abundance of technical
> > voodoo, you might be suprised by how many of them know about proper
> > grounding!
>
>
>
> I suspect a better question might be -What do you think YOU know about
> proper
> grounding?
>
>
>

2036. Re: Beam antenna question (straight vs. angled elements)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 02:23:23 UTC
From: la8ak.xnd@online.no
Message-ID: <3e73cd89.28935821@news.online.no>
Source record: 36989

On Fri, 14 Mar 2003 12:46:03 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>None of us have been licensed long enough that we know everything.
>
>TV antenna elements are sometimes bent into a V shape to take advantage
>of the fact that the higher VHF channels are at about three times the
>frequency of the lower channels. By bending an element, they get a
>rudimentary V beam and associated gain at the higher channels while the
>bending has little effect on the lower channels.
>
>I've done the same trick with a 40 meter dipole. A straight 40 meter
>dipole has a cloverleaf pattern on 15 meters. But by bending each half
>30 degrees, the lobes line up on 15 meters to make a bidirectional
>pattern with a bit of gain. The bending doesn't have much effect on the
>pattern at 40 meters. Naturally, aligning the lobes, and the associated
>gain, is useless at best if the lobes don't end up pointing in the
>directions you want to communicate.
>
>Roy Lewallen, W7EL

interesting, we did some sucessful experiments with bow-horn antennas
for 2m mobile around 1970. The bow-horn antenna proved far better than
the halo, although it is not perfectly omni-directional. Few years
later most turned to vertical, and later to rubber duck and the
activity faded out. Got a German Big-Wheel some years ago, but it is
too large for driving on motorways. Perhaps it is an idea to try the
bowhorn antenna once again for 2m mobile, it is only somewhat larger
than the halo and easy to mount on the roof rack. See
http://home.online.no/~la8ak/7b.htm for more details

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

2037. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 02:23:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3e73d0fa.29817487@news.online.no>
Source record: 36990

On Sat, 15 Mar 2003 16:23:39 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>Strictly speaking, parallel resonance is only a crystal parameter. It
>is the frequency at which the electrode and package capacitances
>resonate with the motional inductance to offer maximum impedance.
>
>Fp = 1 / (2 *pi * sqrt((L1 * C1 * Co) / (C1 + Co)))
>
>where:
>
> L1 = motional inductance
>
> C1 = motional capacitance
>
> Co = shunt capacitance
>
>Oscillators that use the crystal in a "parallel" mode are actually
>using the crystal as an inductor. You can look at the crystal +
>capacitors as a pi network that delivers both the necessary phase
>shift and some impdance change from collector to base.
>
>The "load" capacitance is the value at which the frequency is
>specified. Crystals that are specified as "parallel" mode are often
>tested with the load capacitance in series with the crystal with the
>composite measured as a "series" resonant circuit.
>
>A "parallel" mode crystal specified at a particular load capacitance
>can be used in a series mode oscillator (on frequency) by installing
>the speciified capacitance in series with the crystal.
>
>In the subject circuit, using the base capacitance is a bit iffy but
>probable okay, considering the application.

You seem to understand what you write, but I have had some requests
from persons for xtal specs, the last was somebody who had problem to
get the proper xtal for the Yaesu FTR2410A 2m repeater. The
information is so dull, that you must read the text several times,
study the circuit diagram and still you are not really sure, scan a
copy of the manual and hope that the manufacturer has more experience
than you to interprete manuals

I thought that most modern xtals were 25 or 30pF, but still it is lot
of persons who order 32pF load HC50 or HC49 type xtals, I thought this
is a typical load for FT-243 xtals you ordered from JAN crystals 30

years ago. And sometimes you meet yourself in the door because you thought that normal overtone xtals had zero load capacitance, but still somebody mix up with the FT243 paralell resonant mode.

The manufacturers had bad problems when Kenwood appeared on the marked, requiring 40pF load xtals and nobody could buy proper xtals for the 2m rig without buying from the Kenwood dealer.

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

2038. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 03:22:22 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v77rfihtpgca01@corp.supernews.com>
Source record: 36991
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

Express PCB now has free schematic drawing software available for
download from their web page.

2039. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 08:13:23 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <DmWca.11280$S%3.590926@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36992

several times, he never keyed the mic to transmit either...

--

Those who want to be successful, will find a way,
those that don't, will find an excuse!

2040. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 10:51:34 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b51ksp$24t0l6$1@ID-150848.news.dfncis.de>
Source record: 36993

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:kfd77v8mej3kjdpt38p953ohv5vmp7rf9d@4ax.com...

> Fp = 1 / (2 *pi * sqrt((L1 * C1 * Co) / (C1 + Co)))
>
> where:
>
> L1 = motional inductance
>
> C1 = motional capacitance
>
> Co = shunt capacitance
>
> Oscillators that use the crystal in a "parallel" mode are
actually
> using the crystal as an inductor. You can look at the crystal
+
> capacitors as a pi network that delivers both the necessary
phase
> shift and some impdance change from collector to base.

[...]

You seems to know something about xtals. Good. Maybe you should write an artilcle on here that I was thinking I might have to write. I'm away for a week, maybe by then I might come back and see the kind of article I think needs to be written. Well at least that I think *I* need. You must thought know something xtals and filter design methodology as explained by some of the ham writers such as Wes Hayward W7ZOI and JA Hardcastle G3IJR and perhaps others . These methodologies basically involve an empiracle method of acheiving some kind of filter result. Basically, get hold of some cheap xtals, put in some C values, make a measurement, (computer simulation or otherwise) use your findings to help design further. If you want a better filter, then you might seek to mess with a more expensive xtal. You can make an acceptable xtal filter this way, but I was wanting some information that involved a different methodolgy. That methodology basically involved you having a filter spec to reach, use of filter software, (like AADE's) a bit of messing with capacitance and termination impedances perhaps, and at the end coming out with xtal parameters that you want a manufacturer to meet. It's the thing with xtal partameters, how they affect xtal filter design (what does Q do etc) what xtal parameters does a xtal manufacturer really need to know, how, in practice, can the

manufacturer hope to meet your xtal order: it's these things that are nebulous. It is here is where something is very much required to be written IMO.

So, in a sense there are two bits to write, one explaining the old methodologies *in a certain way* (Like: "In these methodolgies we start out only knowing the xtal frequency, (also that they are cheap and freely available), and we are attempting to make the best xtal filter we can with it. We have some control over xtal parameters, (they are...) but our control is somewhat limited because we are stuck with xtal paramemeters the xtal happens to have.....". We can hope to make a better xtal filter by purchasing a more expensive xtal. Acme.com sell pretty good xtals and they are only $1.99...") Notice the kind of way I'm explaining things - what I'm touching upon. The second bit is to deal with the somewhat novel area where the amateur has a filter spec he must reach and *he is willing to buy custom-made xtals.* Now there will be a methodolgy associated with this other approach. And it will involve xtal simulation software, (I'm using AADE) but also the (possibly involved) relationship with xtal specs and xtal manufacturers. It will touch upon xtal parameters and how they affect xtal filter design (For 5 Mhz filters, 5 pole, 8 Khz BW ESR needs to be around 30 Ohms (say) and xtal manufacturers wiil engineer that into the xtal when you specify the xtal parameters in your order). And how in practice we end up with getting a xtal from the manufacturer with the parameters the software indicates. This second part might call for some time-consuming investigation and analysis, and having expereience with xtal manufacturers. Again, it needs to be written in a certain way to illustrate what it is we are embarking upon in practice.

Anybody want to take up the challenge? I'm inexperienced, but I think there is an article to be written. Let's hear something about motional inductance and capacitance. I was hoping even that an employee from a xtal manufacturer could come onboard and write something, explaining things from his/her perspective. I'm hoping that when I return next week, that maybe progress has been made. Report on my desk by next Sunday. Prompt. :c) Rich.

2041. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 11:11:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v78mvocos14o12@corp.supernews.com>
Source record: 36994

Have you read Chapter 3 in _Experimental Methods in RF Design_?

Roy Lewallen, W7EL

Richard wrote:
> . . .
> Anybody want to take up the challenge? I'm inexperienced, but I
> think there is an article to be written. Let's hear something
> about motional inductance and capacitance. I was hoping even
> that an employee from a xtal manufacturer could come onboard
> and write something, explaining things from his/her perspective.
> I'm hoping that when I return next week, that maybe progress has
> been made. Report on my desk by next Sunday. Prompt. :c) Rich.
>

2042. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 11:17:21 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000041.0085fed7@btinternet.com>
Source record: 36995

Hi,

On the other hand, I watched the movie 'Dish' (Parkes, NSW, VK) the other day in which they were reading out the downlink signal from Apollo 11 in dB. Most impressed! - in fact the gear was mostly the same as that used at the time, complete with old hp counters.

Cheers - Joe

2043. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 11:27:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b51mv9$23u16g$1@ID-150848.news.dfncis.de>
Source record: 36996

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v78mvocos14o12@corp.supernews.com...
> Have you read Chapter 3 in _Experimental Methods in RF Design_?
>
> Roy Lewallen, W7EL

No, but it seems that it would be good to.

Of course a big part of my knowledge gap is the part dealing with xtal manufacturers . Maybe there is no other way but to actually deal with a particular manufacturer, I don't know. I mean can you say to a xtal manufacturer, "Please make a crystal with a motional inductance (L1) of 45mH, motional capactance (C1) of 20fF, and ESR (R1) of 38 Ohms? These issues are what I'm alluding to. In fact, I don't think you can specify a particular value of C1 for a manufacturer to fulfill. Rich.

2044. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 11:31:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b51n6r$24r2bf$1@ID-150848.news.dfncis.de>
Source record: 36847

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b51mv9$23u16g$1@ID-150848.news.dfncis.de...
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v78mvocos14o12@corp.supernews.com...
> > Have you read Chapter 3 in _Experimental Methods in RF
Design_?
> >
> > Roy Lewallen, W7EL
>
>
> No, but it seems that it would be good to.
>
> Of course a big part of my knowledge gap is the part dealing
with
> xtal manufacturers . Maybe there is no other way but to
actually
> deal with a particular manufacturer, I don't know. I mean can
> you say to a xtal manufacturer, "Please make a crystal with a
> motional inductance (L1) of 45mH, motional capactance (C1) of
> 20fF, and ESR (R1) of 38 Ohms? These issues are what I'm
> alluding to. In fact, I don't think you can specify a
particular
> value of C1 for a manufacturer to fulfill. Rich.
>

Or indeed if there is really a need to specify C1.

2045. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 13:17:19 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <KEKdnV9H1vulFemjXTWcpQ@ctc.net>
Source record: 36849

> I'm watching the movie Frequency on network tv. You'd think the prop men
> on the movies would know the difference between a receiver and a
> transceiver.
> The ham rig being shown is an old Heath SB301. No way to hook up a
> microphone
> to that, it wouldn't have been any more trouble for them to dig up an
> SB101 now would it?
>

It is only a movie, Do you really think you can talk on the radio to
someone who is dead ?

Maybe it takes a receiver instead of a transmitter to do that :-)

2046. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 14:21:33 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b52160$24d7op$1@ID-150848.news.dfncis.de>
Source record: 36848

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b51ksp$24t0l6$1@ID-150848.news.dfncis.de...

>
> You seems to know something about xtals. Good. Maybe you
should
> write an artilcle on here that I was thinking I might have to
> write. I'm away for a week, maybe by then I might come back and
> see the kind of article I think needs to be written. Well at
> least that I think *I* need.

[...]

Or

Someone with the AADE filter design program (or similar) set out
under the following criteria, to make pre-determied filter with
the following specs (or close to the specs):

1. Ultimate rejection: > 80 dB
2. Ripple: < 2 dB
3. Typical insertion loss: 250 Hz: < 9 dB; 500 Hz: < 7 dB;
SSB/AM: < 6 dB
4. Zin/Zout: 500 ohms

Performance curve:

http://www.qth.com/inrad/graphs/2612_1.gif

Criteria being:

No xtals to measure, just got to get suitable xtals custom-made
from a manufacturer.

Design program at:

http://www.aade.com/filter32/download.htm

I wonder how the methodology would work out.

Anybody with spare time this week to do that? If you do it and
report your findings I'd be much obliged. Rich.

2047. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 14:28:38 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b521je$22imcg$1@ID-150848.news.dfncis.de>
Source record: 36850

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b52160$24d7op$1@ID-
> 1. Ultimate rejection: > 80 dB
> 2. Ripple: < 2 dB
> 3. Typical insertion loss: 250 Hz: < 9 dB; 500 Hz: < 7 dB;
> SSB/AM: < 6 dB
> 4. Zin/Zout: 500 ohms

I think you also need:

Bandwidth at 6dB: 8000 Hz
Center Freq: 5645.0 Khz

> Performance curve:
>
> http://www.qth.com/inrad/graphs/2612_1.gif

2048. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 14:41:03 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <n7397v00bfb5o1g8p6ahmcpsejg9mq384h@4ax.com>
Source record: 36851

On Sun, 16 Mar 2003 10:51:34 -0000, "Richard"
<nearlynews_email@ntlworld.com> wrote:

[snip]
|
|Anybody want to take up the challenge? I'm inexperienced, but I
|think there is an article to be written. Let's hear something
|about motional inductance and capacitance. I was hoping even
|that an employee from a xtal manufacturer could come onboard
|and write something, explaining things from his/her perspective.
|I'm hoping that when I return next week, that maybe progress has
|been made. Report on my desk by next Sunday. Prompt. :c) Rich.

Sorry... I retired from spec writing several years ago. I don't mind
sharing a few remembrances but right now (this could change if the
stock market keeps sliding) I don't need a job.

Wes

2049. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 14:51:37 UTC
From: North <SM2FNI.non@telia.com>
Message-ID: <Zb0da.710$Du.3241@newsc.telia.net>
Source record: 36853

"zindazenda" <zen@lineisp.co.uk> skrev i meddelandet
news:1047171197.958438@auth2.dns.griffin.net.uk...
> anyone got any info on where to find details on homebrew analyzer??
> preferably using catv or similar tuner..
> Have analyzer at work but would like something simple at home..only using
it
> to set up amps..filters etc..doesnt need to be very accurate...
>
> thanks simon g0zen..
>
> still looking for 10ghz frequency counter info..
>
>
Try here: http://www.nitehawk.com/rasmit/sa50.html

/Ake

2050. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 14:53:39 UTC
From: Ale55andro <DearSpammerTakeThisNowww@tim.it>
Message-ID: <jt397vg1ch16nfgo0jifh2p7vf3evau1ju@4ax.com>
Source record: 36852

On 15 Mar 2003 17:29:30 -0800, lugehall@hotmail.com (J.B. Hall) wrote:

>I have a 40M Rockmite and have had lots of fun with it.
Thanks anybody
I just purchased it online (20m)!
I'll let know you!
Bye
Ale

2051. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:26:05 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b524v3$24frqc$1@ID-150848.news.dfncis.de>
Source record: 36854

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:n7397v00bfb5o1g8p6ahmcpsejg9mq384h@4ax.com...
> On Sun, 16 Mar 2003 10:51:34 -0000, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
>
> [snip]
> |
> |Anybody want to take up the challenge? I'm inexperienced, but
I
> |think there is an article to be written. Let's hear something
> |about motional inductance and capacitance. I was hoping even
> |that an employee from a xtal manufacturer could come onboard
> |and write something, explaining things from his/her
perspective.
> |I'm hoping that when I return next week, that maybe progress
has
> |been made. Report on my desk by next Sunday. Prompt. :c) Rich.
>
> Sorry... I retired from spec writing several years ago. I
don't mind
> sharing a few remembrances but right now (this could change if
the
> stock market keeps sliding) I don't need a job.
>
> Wes

That's fine. If there is a potential article maybe some young
buck might be tempted to make themselves something of a name.
If it was done well, might even be suitable for inclusion in QST.

Rich.

2052. Re: homebrew spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:27:26 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <yJ0da.129868$qi4.61188@rwcrnsc54>
Source record: 36855

Look at W7ZOI home page

W4ZCB
> > anyone got any info on where to find details on homebrew analyzer??
> > preferably using catv or similar tuner..

2053. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:27:27 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <zJ0da.130842$sf5.69809@rwcrnsc52.ops.asp.att.net>
Source record: 36856
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:v77rfihtpgca01@corp.supernews.com...
> Express PCB now has free schematic drawing software available for
> download from their web page.
>
> Yea, but they sure don't have a phone number!

W4ZCB

2054. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:36:05 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7499E5.7050904@bellsouth.net>
Source record: 36857

Ralph Mowery wrote:
>>I'm watching the movie Frequency on network tv. You'd think the prop men
>>on the movies would know the difference between a receiver and a
>>transceiver.
>>The ham rig being shown is an old Heath SB301. No way to hook up a
>>microphone
>>to that, it wouldn't have been any more trouble for them to dig up an
>>SB101 now would it?
>>
>
>
> It is only a movie, Do you really think you can talk on the radio to
> someone who is dead ?
>
> Maybe it takes a receiver instead of a transmitter to do that :-)
>
>
>
The idea was that maybe huge solar flares could enable radio waves to
travel back and forth
through time. StarTrek used the idea that the suns gravity could
slingshot a space ship through
time travel. Not a shread of fact to support these SF ideas, but it
makes a good story.

2055. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:55:42 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <281da.1601$Ad2.1325243@nnrp1.ptd.net>
Source record: 36859

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b4of1b$ve8$1@slb4.atl.mindspring.net...
>
> This method is/was the first widespread exposition of the use of what
today
> is called Quadrature Amplitude Modulation [Really should be called
> Quadrature
> Carrier Modulation or QCM] which is the most general way of generating
> modulated
> waveforms. A QCM modulator can be used to generate all types of
modulation
> from AM to SSB to VSB and ISB and FM, etc...

Peter is correct in his statement about "the most general way of
generating moduated waveforms ..."

If anyone is interested, you can check out a patent that I hold
that expands upon the Weaver architecture in a way that provides
"feed-forward signal regeneration" to combat multipath fading as
well as incorporating the ability to do not just SSB, a variety of
other waveforms (such as QAM) with the ability to take advantage
of feed-forward signal regeneration to overcome channel impairments.

Search for US Patent # 4,726,069 at http://www.uspto.gov/

73,
Carl - wk3c

2056. Re: Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:58:57 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <5b1da.1604$Ad2.1325619@nnrp1.ptd.net>
Source record: 36860

If you are going to do a muti-conversion superhet, it is
best to get as much selectivity as soon in the RX chain
as possible, to combat adjacent channel desense,
intermodulation, AGC "pumping" on undesired signals,
and a variety of other reasons.

On the other hand, the trend in industry is to move towards
direct conversion receivers with software-defined (DSP)
"back ends" that do the filtering, demodulation, etc.

73,
Carl - wk3c

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b4n2sp$2129sc$1@ID-150848.news.dfncis.de...
> Following was written (over at sci.electronics.design)
>
> Plan 2 is the better one, isn't it?
>
> -------------------------
> Hi
>
> Your post has got me thinking about changing my design
> plans.
>
> Perhaps I ought to explain first what I was going to
> do, but may abandon for new plan # 2.
>
> The RX is double conversion, quite old (mid 1960's) .
> It's meant to be for CW and SSB, but really everything
> is geared towards SSB. Selectivity is accomplished at
> 455 Khz where the bandwidth is about 3 Khz. I am
> wanting to modify it in various ways, to have a CW
> filter and a narrower SSB filter at 455 Khz, and to
> arrange for better VFO and digital readout. VFO to
> control Rx and seperate TX. I want VFO to read correct
> frequency going from CW to SSB and vica-versa.
>
> The 1st IF is notionally centered on 5173.9 Khz.
> However the carrier of course is not here but about 1.5
> Khz away at 5172.4 Khz. The 1st IF is nothing but two
> LC resonant citcuits, so passband is wide. Thus
> selectivity is acheived at 455 Khz. However it's so
> wide at around 5173.9 Khz that you get cross mod in the
> second mixer. Solution: place a crystal filter in the

> 1st IF to stop the cross mod. But of course, you could
> not put a 3 Khz wide filter here centered in 5173.9
> Khz, because (unless you are willing to alter your VFO
> and thus alter your frequency readout) a CW signal on
> 5172.4 Khz is out of the passband. So is the SSB
> carrier, but of course that is okay for SSB. So, what
> you do is put in say a 6Khz filiter and that way you
> have no problem attenuation the CW signal. You then
> put seperate CW and SSB 455 Khz filters in and things
> are fine, remembering to put in another xtal in the
> xtal osc for the 2nd IF so that you can centre a CW
> signal at 455 Khz, otherewise it would land at 456.5
> Khz.
>
> This would work, but you got me thinking about
> something possibly better. If you can get the
> crystals, there is no reason why the CW and SSB
> filtering should take place at the 1st IF. What you do
> is construct two filters, a CW filter centered on
> 5172.4 Khz and the SSB filter centered on 5173.9 Khz.
> Changing from CW to SSB requires no change of VFO. If
> you kept the old 455 Khz filter in you would have to
> put in another xtal in the xtal osc for the 2nd IF to
> get the CW signal away from the skirt, but if you took
> that filter out and the 455 Khz IF was pretty broad,
> then you could probably get away with not having
> another crystal for CW working.
>
> Plan # 2 I think is the best one. What say? But it is
> dependent on building crystal filters at these odd
> frequencies. Which has to be, unless I start messing
> with the TX crystal filter and C. O.
>

2057. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 15:59:41 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b52719aif1@slb6.atl.mindspring.net>
Source record: 36858

Richard:

[snip]
> If it was done well, might even be suitable for inclusion in QST.
>
> Rich.
[snip]

Heh, heh... Didn't you know... QST is no longer for "techies"!

Maybe back in the 50's and 60's such an article would fly in QST
but, nowaday's a young "techno-jock" would be lucky just to get
such an article published in QEX.

--
Peter K1PO
Indialantic By-the-Sea, FL.

2058. Very happy with "experiments" circuit results!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 16:17:08 UTC
From: Bert Herald <bert.herald@worldnet.att.net>
Message-ID: <8s1da.11538$S%3.623538@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36861

I just thought I'd share my happiness with my first receiver circuit. I built the one out of the ARRL "experiements" book that I posted about a week or two ago (it's the first circuit in Chapter 1). I had some trouble with the oscillator portion, but I learned a lot about oscillators as a result, and now have a very stable FET-based Hartley. In general, I experimented with many aspects of the circuit and learned quite a bit about coils and refreshed my memory about resonant frequency calcs!

The direct-conversion circuit is based on the NE-602 mixer chip and uses and LM386 for audio amplification. The rest of the parts are pure junkbox (for some people, even those chips might be junkbox!). I got it to work on 40m as it was originally intended, and then redid the coil and capacitor to tune 80m (got tired of hearing all of the AM bc stns squealing into my headset!). It works like a champ on 80m too. I can basically QSY the thing up and down the HF spectrum. I just have to make a new coil and new tap point for the FET and that's it!

I wish I had discovered this part of the hobby sooner. I used to be intimidated by it, and started out building kits instead. But homebrewing your own stuff is so much more fun. I really like the flexibility to make it into whatever you want. I think many more hams would be doing this if they weren't intimidated by feeling it was too hard for them to figure out!

73 and happy building,
Bert

2059. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 16:42:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b529f4$22vd4l$1@ID-150848.news.dfncis.de>
Source record: 36862

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b52719aif1@slb6.atl.mindspring.net...

>
> Heh, heh... Didn't you know... QST is no longer for "techies"!
>
> Maybe back in the 50's and 60's such an article would fly in
QST
> but, nowaday's a young "techno-jock" would be lucky just to get
> such an article published in QEX.

I hear that is the same with RadCom here in UK. :c)

I don't think we are talking about needing a very technical
article actually. Something on the lines of
Wes Hayward's (W7ZOI) or JA Hardcastle's (G3IJR) articles, but
involving a different set of circumstances, ie: no actual xtal
measurements of xtals in hand, main objective of meeting a
particular filter specification, filter software program like
AADE's and a sub objective of procuring appropriate xtals from a
manufacturer.

But there needs to be some mention of C0, C1, R1 & L1 in there,
in some way or other, from some angle or another, even if it's
just to say C1 is never given as a parameter to a xtal
manufacturer. Or whatever. Easy to create a filter schematic with
filter program, and come up with some kind of xtal parameters.
But it's the part dealing with procuring and specifying xtals for
the design which is the stumbling block. Or seems to be.

This thread really ought to be under a different subject heading.

Rich.

2060. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 16:48:25 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <uea97vc1u53kvjf6da2vj22u2itovhudps@4ax.com>
Source record: 36863

On Sun, 16 Mar 2003 10:36:05 -0500, scharkalvin <wa2mze@bellsouth.net>
wrote:

>The idea was that maybe huge solar flares could enable radio waves to
>travel back and forth
>through time. StarTrek used the idea that the suns gravity could
>slingshot a space ship through
>time travel. Not a shread of fact to support these SF ideas, but it
>makes a good story.
>
I recall a phrase from an English Lit class in college, that in
fiction, reading requires the "willing suspension of disbelief".

Granted, some fiction requires suspending a whole heap of disbelief.

The movie "Frequency" is probably not the best vehicle for explaining
ham radio to the general public.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2061. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 18:14:31 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303161014.30070c7b@posting.google.com>
Source record: 36864
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote in message
news:<v77rfihtpgca01@corp.supernews.com>...
> Express PCB now has free schematic drawing software available for
> download from their web page.

Along similar lines, you can use Linear Techonogy's "Switcher CAD"
Spice program as a schematic drawing and editing program, and get the
bonus of being able to do Spice simulations as well.

Cheers,
Tom
(But I'm still looking for the "ideal" free or inexpensive schematic
drawing software!)

2062. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 18:29:34 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e74c27c$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 36865

Hello

> (But I'm still looking for the "ideal" free or inexpensive schematic
> drawing software!)

I use both Protell and Orcad when I am at work, but when I get
home and have some things to make for my self, I use the best
free CAD program there is, CIRCAD, download a free version
from www.holophas.com you can even get a version that runs
under DOS. CIRCAD is a realy fast working schematic, PCB
and mechanical drawing program, runs very good on small PC's.

Regards Max

2063. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 18:32:25 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e74c328$0$140$edfadb0f@dtext02.news.tele.dk>
Source record: 36866

Hello

Sorry, the right link to CIRCAD is

www.holophase.com

Regards Max

2064. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 18:45:56 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <qgh97vsiijtvdko8gf7bmvqbm0pihp7n6q@4ax.com>
Source record: 36867

On Sun, 16 Mar 2003 16:48:25 GMT, Gary S. <Idontwantspam@net> wrote:

>On Sun, 16 Mar 2003 10:36:05 -0500, scharkalvin <wa2mze@bellsouth.net>
>wrote:
>
>>The idea was that maybe huge solar flares could enable radio waves to
>>travel back and forth
>>through time. StarTrek used the idea that the suns gravity could
>>slingshot a space ship through
>>time travel. Not a shread of fact to support these SF ideas, but it
>>makes a good story.
>>
>I recall a phrase from an English Lit class in college, that in
>fiction, reading requires the "willing suspension of disbelief".
>
>Granted, some fiction requires suspending a whole heap of disbelief.
>
>The movie "Frequency" is probably not the best vehicle for explaining
>ham radio to the general public.

I remember a BBC comedy in which somebody said nude painting was "a
willing suspension of disbelief"

To which the other replied " I'm not having people staring in
disbelief at my willie suspension" - Quality

2065. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 20:02:40 UTC
From: la8ak.xnd@online.no
Message-ID: <3e74c0dd.91237284@news.online.no>
Source record: 36868

On Sun, 09 Jun 2002 20:18:24 GMT, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>J M Noeding wrote:
>> <clifto@clifto.com> wrote:
>> >If you like, I can put it up on my site for general access.
>> >
>> Yes, it would be nice if you would do so, tnx.
>
>http://www.clifto.com/TDA1576_cct.gif
>
tnx, but you'll find it on http://home.online.no/~la8ak/7a.htm

--
remove ,xnd to reply

2066. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 20:03:00 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v79mdlseo8s28@corp.supernews.com>
Source record: 36869

Paulo,
Gel cells are lead acid batteries. Like the battery in your car, the plates are consumed in a couple of years. It is really not worth while to buy them used.
Used Ni-cads are a different story. I had a 50 year old electronic flash with the original battery pack that was still useable!
ray
"Paulo Marcondes" <pepm@osite.com.br> wrote in message news:3E7256C4.BDC53A4C@osite.com.br...
> Guys...
>
> I've found a bargain on gel batteries.
> They are about USD 0.85, however they are being sold "as
> is".
> There are 6 12V batteries of 7Ah capacity, but one of them
> have a crack in the bottom.
> I gave them a quick glance, but they seem to be stuffed in
> the bottom, but these protuberances are scratched.
> There is also some solder over the terminals.
>
> The questions:
> How can assure myself that they will be useable?
> What things do I have to check the batteries before I buy?
>
> I know if they are just discharged, there must be something
> around 10 V between the terminals. But I don't know for how
> long they were stored.
> I have no way to test charge them before I buy.
> --
> Paulo E.P. Marcondes
> pepm@osite.com.br

2067. Re: MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 20:28:07 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v79nistjklpt87@corp.supernews.com>
Source record: 36871

Henry,
If you want to know if a used MOV is still functioning as a surge protector, I doubt that there is a good way to do it. A MOV is made up of "sacrificial junctions" with a specified breakdown voltage. Junctions are consumed each time the breakdown voltage is exceeded. Depending on the voltage level and time applied, The MOV could last for years or be consumed in a single event. The MOV continues to protect, and tests OK, as long as there are some junctions left. Test methods that I know of are like starting a car to see if there is gas in the tank; it confirms there is gas but does not tell you how much. I discussed MOV's for equipment surge protection with an engineer at my work; he suggested that they be changed out on a schedule...every year or two.
ray
<wa0goz@arrl.net> wrote in message news:3E70DC41.21AA@arrl.net...
> Does anyone know how to test MOV's please. A google search didn't get
> me what I need.
>
> Thanks and 73
>
> Henry WA0GOZ

2068. Need schematic for Radio Shack HTA-20 2 mtr amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 20:31:54 UTC
From: Jeff <007alfred@comcast.net>
Message-ID: <KcKcnUHLTYG3Q-mjXTWcqw@comcast.com>
Source record: 36870
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I was given a non-working Radio Shack HTA-20 2 meter power amp with
built in preamp.

Can anyone scan an email me a schematic for this unit? Or copy and send
snail-mail?

I'm good on www.qrz.com

Jeff, wd4nmq
wd4nmq@comcast.net

2069. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 22:25:03 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b52tjs$24s$1@slb9.atl.mindspring.net>
Source record: 36872

Richard:

[snip]
> involving a different set of circumstances, ie: no actual xtal
> measurements of xtals in hand, main objective of meeting a
> particular filter specification, filter software program like
> AADE's and a sub objective of procuring appropriate xtals from a
> manufacturer.
>
> But there needs to be some mention of C0, C1, R1 & L1 in there,
> in some way or other, from some angle or another, even if it's
> just to say C1 is never given as a parameter to a xtal
> manufacturer. Or whatever. Easy to create a filter schematic with
> filter program, and come up with some kind of xtal parameters.
> But it's the part dealing with procuring and specifying xtals for
> the design which is the stumbling block. Or seems to be.
>
> This thread really ought to be under a different subject heading.
>
> Rich.
[snip]

What you ask for is not "easy"...

Indeed it is fairly easy to synthesize LC-ladder filters to meet arbitrary
frequency
domain specifications using modern filter synthesis programs. Such general
purpose
programs have been documented and available for many years. LC-ladder is
one
thing, but crystal-ladder filters represent another whole level of
difficulty. i.e. for
various reasons, crystal filter have never practically been synthesized in
the way
you propose. i.e. start with an attenuation spec then run a rational
polynomial
approximation to the spec and synthesize from the polynomials. There is
simply
no way to guarantee that you will come up with a topology and element values
commensurate with any particular crystal manufacturing technology!

Most existing LC-Ladder filter design programs that I know of do not
automatically produce
crystal-friendly designs. It is possible to "force" some crystal-like
arms and/or branches

by judicious *placement* of loss-peaks, etc... George Szentirmai once wrote a paper
on this technique [1], but even then, although the topology comes out to look like crystal
elements in some of the arms/branches, the element values may or may not be comensurate
with typical, or even atypical, crystal manufacturing technology.

Indeed, for crystal filter synthesis these general programs need to be closely "driven" by a
skilled and knowledgeable practicioner who has intimate knowledge of the crystals at his/her
disposal and the ability to force the intmate details of the approximation and synthesis capabilities
of the program and the requirements of the application to match the available crystal parameters.

cfr:

[1] George Szentirmai, "On the Realization of Crystal Band Pass Filters", IEEE Trans. on
Circuit Theory, Vol. CT-11, pp. 299-301, June, 1964.

For a good "modern" summary of the whole subject. See also Chapter 4 entitled "Crystal and
Ceramic Filters" by George Szentirmai, Cornell University, Ithaca, NY in:

[2] Gabor C. Temes, and Sanjit K. Mitra, "Modern filter theory and design", John Wiley
and Sons, New York, 1973, ISBN: 0-471-85130-2, especially Chapter 4, "Crystal
and Ceramic Filters", pp.121-154.

Personally, I believe that it is much easier for the amateur to take the approach offered by
W7ZOI and G3IJR.

I have a few such LC-ladder programs [older Fortran codes] at my own disposal having
created them for various employers/clients over the years. These programs can be run
by near-novices and usually produce good results. I have often looked at creating a crystal-specific
filter design program of the type you propose, and discovered that it is not easy to do... since
the program "operator" must have too much intimate knowledge of the crystals available and know
enough rational polynomial approximation theory to be able to *force* the program into spitting
out many circuits to be "hand-fitted" to the available crystals.

Unfortunately these days there is not much of a commercial market for new crystal filter designs,

there never was a large market! Certainly not a large enough marke to
justify the work and
expense required to perfect and release such a program.

However, if you want a crystal filter designed, just call...

--
Peter K1PO
Indialantic By-the-Sea, FL.

2070. Need info for a qrp project or two.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 22:53:07 UTC
From: zeb@hangarz.com
Message-ID: <8bf2c7a1.0303161453.50633c89@posting.google.com>
Source record: 36873

Hello all.

I'm looking for info for a couple of QRP projects.

Mainly I need a qrp SWR meter. I've seen the tons of info on the internet but alot of it is tailored to milliwatters and the rest of what I've seen is to big and bulky to be semi-trail friendly. I'm looking for simple. around 4 watts max

The second thing is I'm looking for a circut and program that could do keying. I've got a couple of programs that will do audio keying or will do keying with an interface. what I'm looking for is a program that will manually key through a com port (perferablly) like that I could take unhook a straigh key and hook the circut to the key jack.

thanks in advance for any replys.

zeb
kd7evs

2071. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 22:57:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3e74f1af.103737681@news.online.no>
Source record: 36874

On Sun, 16 Mar 2003 16:42:54, "Richard" wrote:

>
>"Peter O. Brackett" <ab4bc@ix.netcom.com>

>> Heh, heh... Didn't you know... QST is no longer for "techies"!
>>
>> Maybe back in the 50's and 60's such an article would fly in
>QST
>> but, nowaday's a young "techno-jock" would be lucky just to get
>> such an article published in QEX.
>
>I hear that is the same with RadCom here in UK. :c)
>
have heard it for many years about Radcom, but don't agree, at least
not as long as G3VA goes on

73
Jan-Martin
http://home.online.no/~la8ak/
--
remove ,xnd to reply

2072. Re: Filter at 1st IF? (not 2nd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-16 22:57:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3e74eef7.103041566@news.online.no>
Source record: 36875

On Sun, 16 Mar 2003 15:58:57 GMT, "Carl R. Stevenson"
<wk3cqth@wk3c.com> wrote:

>> The RX is double conversion, quite old (mid 1960's) .
>> It's meant to be for CW and SSB, but really everything
>> is geared towards SSB. Selectivity is accomplished at
>> 455 Khz where the bandwidth is about 3 Khz. I am
>> wanting to modify it in various ways, to have a CW
>> filter and a narrower SSB filter at 455 Khz, and to
>> arrange for better VFO and digital readout. VFO to
>> control Rx and seperate TX. I want VFO to read correct
>> frequency going from CW to SSB and vica-versa.
>>
it is somewhat limited possibilities for what you really can do, the
old IF filter may not be up to modern standards. Had a boatanchor this
age, and the bandwidthes were not to be regarded as they were marked,
and shape factors were very bad.
When it is an old tube radio you probably must replace a lot of the
construction, often such type of radio's had little room for varying
tube carachteristiques. So it might be better to evaluate if it is
really possible to convert it, or sell it as a boatanchor.

Everything depends on your demands, if you don't live in Europe the
40m band may be lot more quite than it is here.

If the receiver is good in other respects I would go for a few xtals
filters bandwidthes after the first mixer, say 1, 2, and 5kHz, and
take the lower selectivity from the lower IF. With my FT-902 I use
DSP-9 to improve selectivity beyond 0.6kHz with the xtal filter.
FT-902 is a triple conversion receiver, but first and third IF is the
same frequency band

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/3.htm

--
remove ,xnd to reply

2073. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 00:27:16 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b534lr$247imt$1@ID-150848.news.dfncis.de>
Source record: 36876

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b52tjs$24s$1@slb9.atl.mindspring.net...
[....]
> However, if you want a crystal filter designed, just call...
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.

Peter

Okay, it seems that I'm asking for something much more difficult
than I can have imagined. There is of course a way or a
methodology of using a xtal filter program which concludes with
the amateur designer obtaining xtals from manufacture. But it's
not simply a matter of amateur designer taking a xtal filter
specification, designer messing about with some parameters, the
program then spewing all the xtal parameters when design
acheived, and said designer saying to xtal manufacturer I want to
order a xtal with a full complement of such and such parameters.
This methodology it seems is not possible. Even with the AADE
program where you can input and choose a selection from C0, C1,
R1 L1, Q, Fp, and Fs. Perhaps in practice only certain xtal
parameters from the design are of any real interest to the
manufacturer. Meaning that you may have L1 C1 etc, but that does
not help with the manufacturer because they are "difficult"
parameters to deal with/order. Things are different though with
the xtal manufacturer who is producing xtal filters, he has
experience that allows him/her to more realistically
obtain/compute all necessary parameters, of the filter and
associated xtals.

One wonders exactly how the amateur designer or the manufacturer
can make use of C0, C1, R1 L1, Q, Fp, and Fs. Maybe there is
some limited methodology asociated with using them. I mean a
methodology involving xtal manufacturer as well as in design of
filter. If the xtal parameters of the design are not orderable,
to the amateur at least, then it's hard to see how knowing them
can be of any use in the end. But, (I think) somehow things can
be made to progress with the manufacturer, in some fashion which
result in obtaining xtals obtained that will do the job. Perhaps
it's just in quoting a limited range of *key* xtal parameters.
Indeed limited parameters are orderable, and maybe they will be
sufficient, or at least that's the only parameters you are going
to get met. Maybe meeting a limited set of *key* parameters are

sufficient.

Normally, I mean it's been typical, (I gather) if there was a deficiency in filter performance, that has been no more than simply supplying a "better" xtal, the amateur having no idea what it's parameters are, only that it is known to give better results, and he will be able to get a better spec filter with the "better" xtal. Probably all the ham knows is that the Q is higher. But it certainly, on test, simulation or otherwise, does the better job. No attempt in this situation to meet an actual filter design spec requirement through choosing or ordering the full gamet of xtal parameters.

Filter design itself, in the mathematical sense may be a complicated business, but the quest is not quite that. It's what is the best methodology you can achieve involving amateurs, cheap xtal filter design program, filter specs, xtal parameters, no measured xtals parameters, and xtal manufacturers. Remember, here the amateur is not making measurements of xtals he's got. He/she has no xtals.

I've been looking at this off and on for a week. So, I could be tallking nonsense. :c)

Getting late here. Must dash. No more postings, or viewings. Away for a week.

73

Rich.

2074. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 01:33:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b538hk$25aold$1@ID-150848.news.dfncis.de>
Source record: 36877

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b534lr$247imt$1@ID-150848.news.dfncis.de...

>
> Okay, it seems that I'm asking for something much more
difficult
> than I can have imagined.

Final final.

What I think the sitauation is this.

No xtals made are ever quite like with other in other all in
specs. Esp C1, L1.

Therefore xtal filters with same specs do not contain exact same
xtal parameters.

Therefore xtal filter design must involve actual measurement of
xtal parameters.

Therefore if particular xtals are in hand of manufacturer, and
the particular measured xtal specs that are measured are not
conveyed to designer it's very difficult to design xtal filter
esp if C1 is relied upon as a parameter.

AADE program only maximally suitable where designer measures his
xtal parameters.

Well, a thought.

2075. The Dish (was: Re: Frequency)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 02:14:15 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0303161814.5dd6ce3c@posting.google.com>
Source record: 36878

Joe McElvenney <ximac@btinternet.com> wrote in message
news:<VA.00000041.0085fed7@btinternet.com>...

> Hi,

>

> On the other hand, I watched the movie 'Dish' (Parkes, NSW,

> VK) the other day in which they were reading out the downlink

> signal from Apollo 11 in dB. Most impressed! - in fact the gear

> was mostly the same as that used at the time, complete with old

> hp counters.

According to the display at the Parkes Visitor's Centre,
they had to completely reconstruct the 1969 control room
because the original equipment had all long-since been
scrapped.

The readouts on the downlink receivers aren't quite right,
but are still fairly close to the Apollo CSM downlink
frequency, in round figures, 2.28 GHz.

The only other detail (other than those that "made a good
story", in the words of the Visitor's Centre) was that the
Moon is full in the movie, when it was in fact a waxing
crescent on 20 July 1969 (21 July 1969, local time).

They couldn't actually film in the town of Parkes,
because it has grown a lot in the meantime and doesn't
look anything like it did in 1969. So they used Forbes,
the next down down the road, which still has lots of
old buildings.

It's a fun movie, well worth renting. When I went to
Australia last year Parkes was one of my must-sees
(people thought I was nuts...), and I was most impressed
to see the dish swing around as they mapped pulsars in
the Large Magellanic Cloud.

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

2076. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 03:03:18 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E753AFA.CB58B48B@silverstar.com>
Source record: 36879

Markus Circuit Encyclopedias came out in 70s. Were 600-800+ page large-size volumes filled with circuits and categorized as to application. Might be one or more in library near you. I lost my set of three in move from California to Wyoming.

2077. Re: Simple AM shortwave rxvr schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 03:07:05 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E753BDE.D51517A4@silverstar.com>
Source record: 36880

Lots of surplus stores as well as electronics supply houses have 365pF
variable tuning caps.

http://www.alltronics.com - surplus mail order
http://www.allelectronics.com - surplus mail order
http://www.newark.com - retail mail order

2078. Radio power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 03:39:31 UTC
From: Tracy Fort <tracy.fort@gimail.af.mil>
Message-ID: <dpga7vsue37hrjagerfprc7tepcq8jsvs8@4ax.com>
Source record: 36881

I'm building a 13.8 volt ps that call for a 18 v 10 amp power transformer. I have found a 28v 25 amp for a song. Would there be any major mods I would have to make to use the larger transformer in this circuit? It uses a lm723 for regulation. It also uses 3 2n3055 pass transistors.

Do I need to give more info?

thanks,

Tracy Fort

KE4ODD

tracy.fort@gimail.af<NOSPAM>.mil

remove <NOSPAM> for repliess

2079. Eimac Tempilac

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 03:50:51 UTC
From: Paul and Linda Cooper <plcooper@starband.net>
Message-ID: <3E754653.1040502@starband.net>
Source record: 36882

Does anyone have a still-liquid bottle of Eimac's Tempilac around?

Paul, K6PY

2080. Re: Need info for a qrp project or two.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 05:00:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7aljn2l7f1a44@corp.supernews.com>
Source record: 36883

For a QRP SWR meter, you might take a look at "A Simple and Accurate QRP Directional Wattmeter", in QST, Feb. 1990. It's been reprinted in a number of ARRL publications since.

Roy Lewallen, W7EL

Zeb wrote:
> Hello all.
>
> I'm looking for info for a couple of QRP projects.
>
> Mainly I need a qrp SWR meter. I've seen the tons of info on the
> internet but alot of it is tailored to milliwatters and the rest of
> what I've seen is to big and bulky to be semi-trail friendly. I'm
> looking for simple. around 4 watts max
>
> The second thing is I'm looking for a circut and program that could do
> keying. I've got a couple of programs that will do audio keying or
> will do keying with an interface. what I'm looking for is a program
> that will manually key through a com port (perferablly) like that I
> could take unhook a straigh key and hook the circut to the key jack.
>
> thanks in advance for any replys.
>
> zeb
> kd7evs

2081. Re: Need info for a qrp project or two.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 05:06:17 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E7557C9.EB6BD487@cox.net>
Source record: 36884

For a simple, trail friendly SWR bridge, a LED based SWR bridge has
often used.

http://www.extremezone.com/~nk7m/n7veswr.htm

The improved version is preferred. The second diode is not necessary.
The LED
is sensitive down to about 5 mW of reflected power.

- Dan, N7VE

Zeb wrote:
>
> Hello all.
>
> I'm looking for info for a couple of QRP projects.
>
> Mainly I need a qrp SWR meter. I've seen the tons of info on the
> internet but alot of it is tailored to milliwatters and the rest of
> what I've seen is to big and bulky to be semi-trail friendly. I'm
> looking for simple. around 4 watts max
>
> The second thing is I'm looking for a circut and program that could do
> keying. I've got a couple of programs that will do audio keying or
> will do keying with an interface. what I'm looking for is a program
> that will manually key through a com port (perferablly) like that I
> could take unhook a straigh key and hook the circut to the key jack.
>
> thanks in advance for any replys.
>
> zeb
> kd7evs

2082. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 07:35:42 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <iVeda.13898$S%3.710789@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36885

Would you happen to have the data sheet on this device? I've been trying to find specs on this chip for awhile, with no success. The only links to PDF files for this chip have come up dead.

Pete

J M Noeding <la8ak.xnd@online.no> wrote in message news:3e74c0dd.91237284@news.online.no...
> On Sun, 09 Jun 2002 20:18:24 GMT, "Clifton T. Sharp Jr."
> <clifto@clifto.com> wrote:
>
> >J M Noeding wrote:
> >> <clifto@clifto.com> wrote:
> >> >If you like, I can put it up on my site for general access.
> >> >
> >> Yes, it would be nice if you would do so, tnx.
> >
> >http://www.clifto.com/TDA1576_cct.gif
> >
> tnx, but you'll find it on http://home.online.no/~la8ak/7a.htm
>
>
> --
> remove ,xnd to reply

2083. Re: Eimac Tempilac

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 08:08:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <1INL7IEQKYd+EAez@ifwtech.co.uk>
Source record: 36887

Paul and Linda Cooper wrote:
>Does anyone have a still-liquid bottle of Eimac's Tempilac around?

If you still have a bottle of Tempilac that has gone solid, it's still usable.

Tempilac is not a solution, only a suspension of powder in some kind of liquid. The liquid only helps you to paint a small spot of the solid powder in the right place, in a very thin film. It has to dry out before the test spot is ready for use. Volatile solvents only help it to dry more quickly.

Experiment with various liquids.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2084. Re: Very happy with "experiments" circuit results!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 09:58:55 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <O_gda.96$DS2.26549@newsfep1-win.server.ntli.net>
Source record: 36886

Bert Herald <bert.herald@worldnet.att.net> wrote in message
news:8s1da.11538$S%3.623538@bgtnsc04-news.ops.worldnet.att.net...
(snip)
I think many more hams would be doing this if
they weren't intimidated by feeling it was too hard for them to figure
out!

Hi Bert,
Here are some of the comments I hear regularly from some hams today
for not doing any construction:
"I haven't the time".
"I could never build anything like that"
"I don't know where my soldering iron is"
"Nobody does any building any more"

Thank goodness we all don't feel the same way!

73

Duncan G4DFV

2085. rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 13:47:34 UTC
From: Jan Wagner <jwagner@lyta.hut.fi>
Message-ID: <Pine.OSF.4.50.0303171531510.50591-100000@lyta.hut.fi>
Source record: 36888

Hi,

i'd like to build a frequency controlled filter into an rf preamp.
It's for a direct conversion receiver 0-50MHz, and the LO frequency should
control the input rf bandpass filter center frequency. The filter
pass band bandwidth is fixed.

Are switched capacitor filters any good for this? Or a Tayloe mixer style
setup working as a bandpass filter? Maybe someone has already tried one of
these? (google showed some postings on the topic but not much else than
speculations)
Or are there some "really simple" frequency-controlled RF bandpass filter
alternatives which I just missed?

Thanks!

- jfw

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2086. Re: MOV's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 13:49:38 UTC
From: Jim N2VX <nospam@nospam.com>
Message-ID: <hjkb7vgrkilrgjn6qudt1nu86r4nhq5n1u@4ax.com>
Source record: 36889

The conduction voltage of MOV's goes down as they get "used up."
I had one that generated RFI by conducting on the sine wave peak.
Regular replacement is wise given the low cost. Don't get cheap by
getting the tiny ones either.

Also, make sure they are after the switch and not continuously hooked
up to the ac line. No point in having them go bad prematurely.

And finally, don't forget the "metal can" RFI filters. They have
series inductors and parallel capacitors. Transients have higher
frequency components and anything that attenuates them is good.

73,
Jim

On Sun, 16 Mar 2003 12:28:07 -0800, "Capoot" <rlcap@xprt.net> wrote:

>Henry,
>If you want to know if a used MOV is still functioning as a surge protector,
>I doubt that there is a good way to do it. A MOV is made up of "sacrificial
>junctions" with a specified breakdown voltage. Junctions are consumed each
>time the breakdown voltage is exceeded. Depending on the voltage level and
>time applied, The MOV could last for years or be consumed in a single event.
>The MOV continues to protect, and tests OK, as long as there are some
>junctions left. Test methods that I know of are like starting a car to see
>if there is gas in the tank; it confirms there is gas but does not tell you
>how much. I discussed MOV's for equipment surge protection with an engineer
>at my work; he suggested that they be changed out on a schedule...every year
>or two.
>ray
><wa0goz@arrl.net> wrote in message news:3E70DC41.21AA@arrl.net...
>> Does anyone know how to test MOV's please. A google search didn't get
>> me what I need.
>>
>> Thanks and 73
>>
>> Henry WA0GOZ
>

2087. Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 14:40:36 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e75dc87.16159348@news.freeserve.net>
Source record: 36891

Hi Folks,
I just bought 100 xtals on 70.7Mhz from Ebay UK, I assume they are either 3rd or 5th overtone, anyway, I've been looking for ladder filter designs, calculations etc.
Mention is made about selecting xtals within 50Hz and similar, low, ESR.
My questions are, should the frequency selection be for parallel or series resonance and how do you measure the ESR of a crystal ?.
thanks Mike W, G8NXD aka M3MSM qthr

2088. filter for electrical RFI noise from converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 14:53:38 UTC
From: lgagnon@sherrittoil.com
Message-ID: <1d3b4598.0303170653.a36ede3@posting.google.com>
Source record: 36892

Recreational vehicle "converters" are essentially 120-12volt unfiltered, unregulated power supplies having high amp output to power the RV 12 volt circuits and charge the coach batteries (they consist only of a large high amp transformer and diode bridge). I have a 40 amp converter in my 22' Class C motorhome. It has a second 5 amp line to charge the batteries. The converter works ok (as far as converters go) but creates terrible electrical hash RFI noise, very noticeable on short wave frequencies and also on the AM radio band.

My plan is to try to filter out this common-mode noise by installing a quality AC line filter right at the point where the AC line enters the converter and then install some .01uF bypass capacitors on the DC lines where they exit the converter.

Has anyone tried anything similar and if so, what effect did such work have? Or, if anyone has any other suggestions to offer (other than replacing the converter with a proper power supply!) to help eliminate the noise I would really appreciate it.

Larry Gagnon VE6MK

2089. Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 15:08:16 UTC
From: Arthur Shulman <dentist@nornet.on.ca>
Message-ID: <3E75E4E0.E5BDFB46@nornet.on.ca>
Source record: 36893

Help! I have available 2 74LS290N divide-by-10 chips. I wish to divide
by 10.
Using the manufacturers data sheet, I am driving the chip with 10 mhz
from a TTL source. I am unable to see /2 or /5 output using various
combinations of output connections.
2 different chips tried, and no apparent faults that might have damaged
something.

What did I do wrong? Can anyone suggest where to start troubleshooting?

Arthur Shulman

2090. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 15:38:28 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <uRlda.45649$Dp.32945@fe01.atl2.webusenet.com>
Source record: 36894

Is there a reset, set, clear, or other such input that must be in the proper
state before it will count? What about the carry input pin?

I have never used a '290 but have used it's older cousin, the 7490 series.
As I recall the '90 is an asynchronous counter. Depending on your
application you may want to consider one of the synchronous devices such as
the 74LS160series. An asynchronous device may have undesired glitches on
the outputs particularly if you are combining them in other logic gates.

Jim
N8EE
"Arthur Shulman" <dentist@nornet.on.ca> wrote in message
news:3E75E4E0.E5BDFB46@nornet.on.ca...
> Help! I have available 2 74LS290N divide-by-10 chips. I wish to divide
> by 10.
> Using the manufacturers data sheet, I am driving the chip with 10 mhz
> from a TTL source. I am unable to see /2 or /5 output using various
> combinations of output connections.
> 2 different chips tried, and no apparent faults that might have damaged
> something.
>
> What did I do wrong? Can anyone suggest where to start troubleshooting?
>
> Arthur Shulman
>
>

2091. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 15:42:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <hkpb7vkmo4cjv961926iiihum6drrrdo6e@4ax.com>
Source record: 36895

On Mon, 17 Mar 2003 14:40:36 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:

|Hi Folks,
|I just bought 100 xtals on 70.7Mhz from Ebay UK, I assume they are
|either 3rd or 5th overtone, anyway, I've been looking for ladder
|filter designs, calculations etc.
|Mention is made about selecting xtals within 50Hz and similar, low,
|ESR.
|My questions are, should the frequency selection be for parallel or
|series resonance and how do you measure the ESR of a crystal ?.

You are interested in the series resonant frequency.

ESR is easy to measure if you have a network analyzer but more difficult in the home lab.

First you need a signal source that has the necessary stability and fine adjustment capability. You need to be able to read frequency to a Hertz. You also need some type of rf voltmeter, power meter, etc. to measure the amplitude of the response.

Imbed the crystal (in series) between a couple of resistive pads that stiffen the source impedance of the generator and provide a load. Drive the crystal with the generator while using the rf indicator to measure the signal through the crystal.

You must be careful to not overdrive the crystal. ESR (and everything else) will change with drive. I would probably shoot for 1 mW at the crystal.

Tune the generator to maximize the response at the meter and note the frequency and amplitude. Leave the generator at this frequency, remove the crystal and substitute low value resistors until you find one that gives the same amplitude as before. The value of the resistor is the ESR.

To do a lot of crystals, you can "calibrate" the meter in units of resistance beforehand by using a range of resistors. This isn't rocket science, as exact values of ESR are usually of secondary importance in both oscillators and filters.

ESR is a measure of both the lead and electrode resistances and the mechanical "friction" of the crystal. As such, its measurement is often more of a screening tool to look for manufacturing defects than it is an important parameter in the end application.

2092. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 15:48:21 UTC
From: Arthur Shulman <dentist@nornet.on.ca>
Message-ID: <3E75EE45.8989E325@nornet.on.ca>
Source record: 36896

Jim, could you have a look at the datasheet at:
http://www.utm.edu/~leeb/74LS293.pdf

I really don't know anything about this subject, having been involved for the last 40 years with RF rather than digital development. If I need to do anything with the set/reset inputs, the datasheet doesn't give me a clue. I expect that a knowledgeable person (which I am not) would know that!

The 290 is all I have on hand, and no source of much else close at hand. I do have a couple of 74LS74's, if that would help. Can you refer me to a Web digital tutorial that might deal with this subject?

Thanks for your time.

Arthur, VE3ZV

JLB wrote:

> Is there a reset, set, clear, or other such input that must be in the proper
> state before it will count? What about the carry input pin?
>
> I have never used a '290 but have used it's older cousin, the 7490 series.
> As I recall the '90 is an asynchronous counter. Depending on your
> application you may want to consider one of the synchronous devices such as
> the 74LS160series. An asynchronous device may have undesired glitches on
> the outputs particularly if you are combining them in other logic gates.
>
> Jim
> N8EE
> "Arthur Shulman" <dentist@nornet.on.ca> wrote in message
> news:3E75E4E0.E5BDFB46@nornet.on.ca...
> > Help! I have available 2 74LS290N divide-by-10 chips. I wish to divide
> > by 10.
> > Using the manufacturers data sheet, I am driving the chip with 10 mhz
> > from a TTL source. I am unable to see /2 or /5 output using various
> > combinations of output connections.
> > 2 different chips tried, and no apparent faults that might have damaged
> > something.
> >
> > What did I do wrong? Can anyone suggest where to start troubleshooting?
> >
> > Arthur Shulman
> >
> >

2093. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 16:14:15 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b54s8nsit1@freenet9.carleton.ca>
Source record: 36798

Arthur Shulman (dentist@nornet.on.ca) writes:
> Help! I have available 2 74LS290N divide-by-10 chips. I wish to divide
> by 10.
> Using the manufacturers data sheet, I am driving the chip with 10 mhz
> from a TTL source. I am unable to see /2 or /5 output using various
> combinations of output connections.
> 2 different chips tried, and no apparent faults that might have damaged
> something.
>
> What did I do wrong? Can anyone suggest where to start troubleshooting?
>
> Arthur Shulman
>
>
Comparing it briefly to the 7490, I don't see any difference other than
pinouts. (There may be more, but it's not immediately obvious.)

Taking Jim's suggestion about the reset pins, ground them for
just straight decade counting. So ground pins 1 & 3, and pins
12 & 13. You do realize there are two separate sections in there,
a flip-flop that divides by two, and a more complicated section that
divides by 5. You have to jumper the two sections together, one output
to the input of the other, in order to get divide by ten. For that
matter if you don't have that jumper, you won't have output from
the section that isn't being clocked.

How you arrange the two sections may depend on what you are doing.
If you need a square wave out, you'd connect the divide by 2 section
to the output of the divide by 5.

input A ___ /2___QA (pin 9)
(pin 10)

input B ___ /5___QB (pin 5)
(pin 11) QC (pin 4)
QD (pin 8)

Michael VE2BVW

2094. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 16:26:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e75f5b7.22608107@news.freeserve.net>
Source record: 36797

Thankyou Wes, I have all thats required for measuring the ESR with
your method, an 9850 dds, VVM etc. Two follow-up queries. When you say
"stiffen up" the source impedance, do you mean a straight 50r/50r
attenuator pad or an pad with impedance step-up eg. 50r/500r, and if
so to what impedance?. Also, what is the usual range of ESR, are we
talking ohms, Kohm, Meg or what ?.
--
On Mon, 17 Mar 2003 08:42:27 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Mon, 17 Mar 2003 14:40:36 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:
>
>|Hi Folks,
>|I just bought 100 xtals on 70.7Mhz from Ebay UK, I assume they are
>|either 3rd or 5th overtone, anyway, I've been looking for ladder
>|filter designs, calculations etc.
>|Mention is made about selecting xtals within 50Hz and similar, low,
>|ESR.
>|My questions are, should the frequency selection be for parallel or
>|series resonance and how do you measure the ESR of a crystal ?.
>
>You are interested in the series resonant frequency.
>
>ESR is easy to measure if you have a network analyzer but more
>difficult in the home lab.
>
>First you need a signal source that has the necessary stability and
>fine adjustment capability. You need to be able to read frequency to
>a Hertz. You also need some type of rf voltmeter, power meter, etc.
>to measure the amplitude of the response.
>
>Imbed the crystal (in series) between a couple of resistive pads that
>stiffen the source impedance of the generator and provide a load.
>Drive the crystal with the generator while using the rf indicator to
>measure the signal through the crystal.
>
>You must be careful to not overdrive the crystal. ESR (and everything
>else) will change with drive. I would probably shoot for 1 mW at the
>crystal.
>
>Tune the generator to maximize the response at the meter and note the
>frequency and amplitude. Leave the generator at this frequency,
>remove the crystal and substitute low value resistors until you find

>one that gives the same amplitude as before. The value of the
>resistor is the ESR.
>
>To do a lot of crystals, you can "calibrate" the meter in units of
>resistance beforehand by using a range of resistors. This isn't
>rocket science, as exact values of ESR are usually of secondary
>importance in both oscillators and filters.
>
>ESR is a measure of both the lead and electrode resistances and the
>mechanical "friction" of the crystal. As such, its measurement is
>often more of a screening tool to look for manufacturing defects than
>it is an important parameter in the end application.

2095. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 16:39:18 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e75fa23$0$144$edfadb0f@dtext02.news.tele.dk>
Source record: 36799

Hello Arthur

> The 290 is all I have on hand, and no source of much else close at hand. I
do
> have a couple of 74LS74's, if that would help. Can you refer me to a Web
digital
> tutorial that might deal with this subject?

You can maybe learn somthing about the 290 by looking at
this http://netti.nic.fi/~atpanula/digital_clock/digital_clock.html

Regard Max

2096. Re: Very happy with "experiments" circuit results!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 16:49:52 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e75fc9d$0$120$edfadb0f@dtext02.news.tele.dk>
Source record: 36800

Hello

> Here are some of the comments I hear regularly from some hams today
> for not doing any construction:
> "I haven't the time".
> "I could never build anything like that"
> "I don't know where my soldering iron is"
> "Nobody does any building any more"

And they all complaint about that HAM parts is hard to
find these days.

Regards Max

2097. Re: Radio power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 16:55:43 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E775058.79677D17@rica.net>
Source record: 36801

Tracy Fort wrote:
>
> I'm building a 13.8 volt ps that call for a 18 v 10 amp power
> transformer. I have found a 28v 25 amp for a song. Would there be any
> major mods I would have to make to use the larger transformer in this
> circuit? It uses a lm723 for regulation. It also uses 3 2n3055 pass
> transistors.

Either you will have to change the regulator to a switching design to
efficiently handle the extra voltage, or add water cooling to the pass
transistors. Even better would be to add a center tap to the 28 volt
winding, to allow a two diode full wave rectifier. But without seeing
the construction of the transformer, I can't say how feasible that
is. You might also just unwind turns from the secondary till you get
the voltage down to the design value. Or you could connect a second
transformer upstream of this one, to reduce the line voltage.

--
John Popelish

2098. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 17:10:59 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <q10c7v8b37pirao7jcvg6p8m369h2nt1o5@4ax.com>
Source record: 36802

Caveat Emptor.

If you KNOW the source of the batteries, you can sometimes have a bargain on your hands. For example: at work we use Gel Cell batteries for remote telemetry stations. These batteries float on charge most of the time and when the power goes out, they supply 24 volts to the system until the power comes back.

We used to replace these cells based strictly on time in service. We don't do this any more because our battery chargers are being replaced with more intelligent models which monitor charging current at given voltages and raise alarms if the profile is too far off from normal.

You may find some who replace such batteries based on time alone. If you do, you may have something worth using. The key is to know where those batteries have been all their lives and why they were replaced...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

2099. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 17:19:45 UTC
From: Arthur Shulman <dentist@nornet.on.ca>
Message-ID: <3E7603B1.AE484F38@nornet.on.ca>
Source record: 36803

Ok gentlemen:
Pin connections are as follows:

1 Grnd
2 n/c
3 Grnd
4 n/c
5 n/c
6 n/c
7 Grnd
8 Q3 output ??????
9 n/c
10 n/c
11 1 mhz TTL input direct from driver
12 Grnd
13 Grnd
14 +4.85 vdc

With this configuration, the only signal I can scope is on pin 11, the input channel

If I try the other diver, with the input on pin 10, I get the same results.

Like the chip is dead.

But I can get it ti switch states if I apply +vcc or grnd via a 10k resistor to pins 1/3, 12/13 if I lift them from ground first.

Arthur, VE3ZV

2100. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 17:56:36 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <du2c7v804dvnicvemtcup5f2gstisc2idd@4ax.com>
Source record: 36804

On Mon, 17 Mar 2003 16:26:27 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:

|Thankyou Wes, I have all thats required for measuring the ESR with
|your method, an 9850 dds, VVM etc. Two follow-up queries. When you say
|"stiffen up" the source impedance, do you mean a straight 50r/50r
|attenuator pad or an pad with impedance step-up eg. 50r/500r, and if
|so to what impedance?. Also, what is the usual range of ESR, are we
|talking ohms, Kohm, Meg or what ?.

The ususal range for ESR will be from a few ohms to perhaps 100.

No need to try to do any impedance matching. 50 ohm pads are fine.

2101. Re: Radio power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 18:06:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303171006.4b828e51@posting.google.com>
Source record: 36805

Tracy Fort <tracy.fort@gimail.af.mil> wrote in message
news:<dpga7vsue37hrjagerfprc7tepcq8jsvs8@4ax.com>...
> I'm building a 13.8 volt ps that call for a 18 v 10 amp power
> transformer. I have found a 28v 25 amp for a song. Would there be any
> major mods I would have to make to use the larger transformer in this
> circuit? It uses a lm723 for regulation. It also uses 3 2n3055 pass
> transistors.

Well, yes, things will be a bit different. _IF_ the 28V transformer
has a center-tap, there's some hope of making it work efficiently, but
if not, you will start out with too high a voltage to make it
practical to regulate down with a linear pass system. For example,
assuming a capacitor-input filter in both cases, the 18V transformer
would try to charge the capacitor to a peak of about 24 volts. It
won't make it quite that high under load, and there will be ripple.
The average might be, say, 21 volts or so. If you are wanting to draw
10 amps from the output, and you're dropping to 13.8V, that's 7.2V*10A
= 72 watts dissipation. That's quite a bit. Think "75-W light bulb".
But the 28V transformer will deliver nominally 38V peak to the
capacitor, and since it's a higher-current transformer, it may
actually deliver a bit more, assuming the voltage rating is at full
load. So assuming a similar ripple, the average voltage at the filter
cap might be 36V. Now you're dropping 22.2V, still at 10A, so you
have 222W power dissipation in the pass elements, just to get 138W
output. Also, the peak voltage (which might be up close to 45V with
no load and high line) might damage parts unless you're careful about
the design.

If the 28V transformer has a center-tap, you could reasonably make a
more efficient supply, using a full-wave center-tapped configuration.
Then you might have 19V peak at the cap, and with a 6,000uF cap, you'd
have about 3V p-p ripple. That would give a minimum voltage at
negative-going peaks of the ripple of 16V, leaving plenty of headroom
for the pass elements. Even if the peak was only 17.5V, you could
have enough headroom, IF you're careful about the pass design. With
this scenario, about 17.5V average dropped to 13.8V, the dissipation
is only 37W at 10A, which is a respectable efficiency. Just beware of
low line inputs! Also, the optimum design will probably be a bit
different from what you're starting with.

Cheers,
Tom

2102. Decade Divider - Success!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 18:30:48 UTC
From: Arthur Shulman <dentist@nornet.on.ca>
Message-ID: <3E761458.163D6A1E@nornet.on.ca>
Source record: 36806

For some **&(@*^& reason, the thing has begun to work properly. Now it is running at 10 mhz & I am watching the 10 & 1 mhz outputs on the scope. I have tested it on the breadboard to 17mhz, so that should be a good enough margin. Bypassing Vcc to ground made no difference.

It is indeed necessary to ground the master set & reset pins 1&3, 12&13. The division quits if they are floating.

I have no idea why the original failure. Are there Leprechauns (sp) about?

Many thanks for the steer in the right direction.

Arthur, VE3ZV

2103. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 18:33:18 UTC
From: troglodite@aol.com
Message-ID: <20030317133318.27509.00000209@mb-mu.aol.com>
Source record: 36807

>
>But I can get it ti switch states if I apply +vcc or grnd via a 10k resistor
>to pins 1/3, 12/13 if I lift them from ground first.
>

Sounds like your input signal does not have fast enough rise and fall times.
These devices are EDGE TRIGGERED not level triggered.

2104. Re: Decade Divider - Success!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 18:43:22 UTC
From: troglodite@aol.com
Message-ID: <20030317134322.27509.00000212@mb-mu.aol.com>
Source record: 36808

>
>I have no idea why the original failure. Are there Leprechauns (sp)
>about?
>

Yes. Especially today, it's St. Patrick's day!

2105. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 19:09:48 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000043.009ef529@btinternet.com>
Source record: 36809

Hi,

There is an article in the Jan/Feb 2002 issue of QEX by Jack Hardcastle, G3JIR that sets out the procedure. His method also enables you to evaluate the series/shunt capacitances and by extension the Q. The draughtsman inadvertently added a crystal to the series network but that will be obvious when you look at it.

I used his method to check out some cheap computer crystals for use in a narrow spectrum analyser filter. If you have any difficulty finding a copy of the article, please email me.

Cheers - Joe

2106. Re: Decade Divider - Success!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 19:13:20 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b556ogfgg1@freenet9.carleton.ca>
Source record: 36810

Arthur Shulman (dentist@nornet.on.ca) writes:
> For some **&(@*^& reason, the thing has begun to work properly. Now it
> is running at 10 mhz & I am watching the 10 & 1 mhz outputs on the
> scope. I have tested it on the breadboard to 17mhz, so that should be a
> good enough margin. Bypassing Vcc to ground made no difference.
>
> It is indeed necessary to ground the master set & reset pins 1&3, 12&13.
> The division quits if they are floating.
>
> I have no idea why the original failure. Are there Leprechauns (sp)
> about?
>
> Many thanks for the steer in the right direction.
>
> Arthur, VE3ZV
>
>
>
>
How are you wiring it up, on a breadboard? If so, perhaps one
wire was not making proper contact, something I've noticed from
time to time when using those white breadboards.

Michael VE2BVW

2107. Re: Radio power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 19:44:56 UTC
From: Tracy Fort <tracy.fort@gimail.af.mil>
Message-ID: <0j9c7vspsj684n6cplb4tonn3443lj7ke2@4ax.com>
Source record: 36811

Thanks Tom and all others that answered....

I will pass on this transformer and look for one rated at what the
design calls for...

Tracy

On 17 Mar 2003 10:06:17 -0800, k7itm@aol.com (Tom Bruhns) wrote:

>Tracy Fort <tracy.fort@gimail.af.mil> wrote in message
news:<dpga7vsue37hrjagerfprc7tepcq8jsvs8@4ax.com>...
>> I'm building a 13.8 volt ps that call for a 18 v 10 amp power
>> transformer. I have found a 28v 25 amp for a song. Would there be any
>> major mods I would have to make to use the larger transformer in this
>> circuit? It uses a lm723 for regulation. It also uses 3 2n3055 pass
>> transistors.
>
>Well, yes, things will be a bit different. _IF_ the 28V transformer
>has a center-tap, there's some hope of making it work efficiently, but
>if not, you will start out with too high a voltage to make it
>practical to regulate down with a linear pass system. For example,
>assuming a capacitor-input filter in both cases, the 18V transformer
>would try to charge the capacitor to a peak of about 24 volts. It
>won't make it quite that high under load, and there will be ripple.
>The average might be, say, 21 volts or so. If you are wanting to draw
>10 amps from the output, and you're dropping to 13.8V, that's 7.2V*10A
>= 72 watts dissipation. That's quite a bit. Think "75-W light bulb".
> But the 28V transformer will deliver nominally 38V peak to the
>capacitor, and since it's a higher-current transformer, it may
>actually deliver a bit more, assuming the voltage rating is at full
>load. So assuming a similar ripple, the average voltage at the filter
>cap might be 36V. Now you're dropping 22.2V, still at 10A, so you
>have 222W power dissipation in the pass elements, just to get 138W
>output. Also, the peak voltage (which might be up close to 45V with
>no load and high line) might damage parts unless you're careful about
>the design.
>
>If the 28V transformer has a center-tap, you could reasonably make a
>more efficient supply, using a full-wave center-tapped configuration.
>Then you might have 19V peak at the cap, and with a 6,000uF cap, you'd
>have about 3V p-p ripple. That would give a minimum voltage at
>negative-going peaks of the ripple of 16V, leaving plenty of headroom
>for the pass elements. Even if the peak was only 17.5V, you could
>have enough headroom, IF you're careful about the pass design. With
>this scenario, about 17.5V average dropped to 13.8V, the dissipation

>is only 37W at 10A, which is a respectable efficiency. Just beware of
>low line inputs! Also, the optimum design will probably be a bit
>different from what you're starting with.
>
>Cheers,
>Tom

Tracy Fort

KE4ODD

tracy.fort@gimail.af<NOSPAM>.mil

remove <NOSPAM> for repliess

2108. Re: Decade frequency dividers - need help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 19:47:31 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e762640$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 36812

Hello

> Sounds like your input signal does not have fast enough rise and fall
times.
> These devices are EDGE TRIGGERED not level triggered.

And please notice that the 290 is triggered on the negative going pulse.

Regards Max

2109. Ham radio swap meet...FREE!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 21:34:59 UTC
From: denton <denton@oregontrail.net>
Message-ID: <b55eo2pts1@news.oregontrail.net>
Source record: 36813
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

The Pendleton Amateur Radio Club, in Pendleton Oregon is having a tailgate swap meet this coming Saturday, March 22nd at the South Pendleton City Hall parking lot.
There is no admission charge for either participants or sellers!
Time is from 8 in the morning to about noon.

2110. Re: schematic drawing software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 22:25:30 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b55hqd$ej9$1@nyytiset.pp.htv.fi>
Source record: 36815
Cross-posted to: sci.electronics.design,alt.cad.turbocad,rec.radio.amateur.homebrew

"scharkalvin" <wa2mze@bellsouth.net> schrieb im Newsbeitrag
news:3E73D7E5.9020404@bellsouth.net...
> Don wrote:
>
> If you run Linux, try gschem

Or Eagle.

www.cadsoft.de

Schematics and PCB layout and autorouter, with error checks, design
rules checking, PCB and schematics consistency check, nice large parts
library. The only limit in the freeware version is the board size
("only" two layers and 10cm x 8cm board size). IMHO it's the best free
schematics+PCB combo for now, running both Linux and Windows.

cheers,
- jfw

2111. Re: Circuit from new ARRL RF Design book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 22:28:32 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <f7icnc7wu8O10eujXTWcoQ@giganews.com>
Source record: 36814

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:<d42b5a72.0303042154.300a2b40@posting.google.com>...

> Absolutely not. The book is excellent. It's just

> the whiners who will always find something to bitch

> about.

>

I agree that the book is an excellent, indispensible one -- we're lucky to have it at all. But I don't think I'm "whining" when I express my disenchantment with a $50 trade paperback whose schematics appear to have been drafted with a $25 shareware CAD program.

Contrary to being an ARRL-basher, I'd point out that ARRL publications have set a high standard for quality electronic draftsmanship for at least the past fifty years. It's a shame that they chose the occasion of Wes Hayward's long-awaited release to drop their production-quality standards. I expect more precisely *because* this is an ARRL publication.

-- jm (sorry if this is a dupe message, it didn't seem to post the first time)

---

http://www.qsl.net/ke5fx

Note: My E-mail address has been altered to avoid spam

2112. Re: AD9854 question, no output...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-17 22:32:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <TnOdnWvi6sqB0OujXTWcrg@giganews.com>
Source record: 36816

"Jan Wagner" <jwagner@cc.hut.fi> wrote in message
news:b4po32$2md$1@nyytiset.pp.htv.fi...
,
> Serial looks much more dreadful. Parallel I/O seems the easiest and
fastest
> way to go (no pun) - t.ex. no probs with the internal update clock.

The trick with serial is to initialize it twice. :) Take a look at the
AD9854 control source at http://www.qsl.net/ke5fx/synth/synth100.zip (linked
from the bottom of the page at http://www.qsl.net/ke5fx/synth.html). It's in
C, but shouldn't be too hard to read. Not the easiest chip to initialize,
unfortunately, but it can be done!
-- jm

---

http://www.qsl.net/ke5fx

Note: My E-mail address has been altered to avoid spam

2113. Kenwood Mic MC-50 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 00:05:11 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <bboc7v4u9takmss69jhajij0t7psufgtvp@4ax.com>
Source record: 36817

I have lost my documentation for an old Kenwood MC-50 Microphone and need to know how to select hi or low impedance settings.

There is a red dot on the plug which goes into the microphone. I know if the dots between the microphone and plug are in alignment is for one setting (high or low Z), but I don't remember which is which.

Can anyone out there help me out?

Thanks
Danny, K6MHE

2114. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 00:43:41 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E766BBD.ECC956C@osite.com.br>
Source record: 36818

Jake Brodsky wrote:
>
> Caveat Emptor.
>
> If you KNOW the source of the batteries, you can sometimes have a
> bargain on your hands. For example: at work we use Gel Cell batteries
<snip>
> If
> you do, you may have something worth using. The key is to know where
> those batteries have been all their lives and why they were
> replaced...

Well... as I don't, I assume these batteries are not a
bargain at all.
I picked my multimeter this morning jst to go check those
batteries. I ended up going around somewhere else and forgot
those batteries. Tomorrow I may get there again and check
the terminal voltage, just to tell the NG.

thanks everyone.
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2115. Re: Tips on buying used batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 02:51:25 UTC
From: mcalhoun@ksu.edu
Message-ID: <b561jd$aks@unix2.cc.ksu.edu>
Source record: 36819

><snip>
>> Tell you what -- I'll bet you six bucks that the total usable capacity
>> of the lot of them doesn't exceed 7 Ah.

>....[snip]....
>Probably used batteries are not worth the hassle, isn't it?

BAD CONCLUSION! Better would have been "It depends...."

I have a "deal" with the electronics technician in our local hospital:
he changes lots of batteries in lots of equipment (portable X-ray machine,
lap-top computers, etc.), and, instead of disposing of them however he
formerly did, he gives all of them to me. I test them, pass those that
are really "dead" on to the County recycle people, and then either use
the rest myself or make them available to other hams in the County.

For example, of each TEN X-ray batteries (10 x 12 = 120 volts), usually
only two or three are bad, which means seven or eight are good! And
they are 16 amp-hour batteries -- large enough to be quite useful.

Just last week someone gave me a UPS with a totally-dead internal battery;
I replaced it with a hospital battery having the IDENTICAL form, and all
I had to cobble was a slightly-different connector! The computer I am
using at this instant is now powered by that UPS!

Your mileage may vary for used batteries from a ham-fest.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2116. FA: Very clean Tek 494P spectrum analyzer, manuals, mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 02:53:10 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.18e029de5f90f1a5989686@news-central.giganews.com>
Source record: 36820
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.equipment

This is the last of a few Tek 49x-series analyzers I've gone through and repaired/calibrated. It has a very fresh CRT, a spot-on calibration job (at least as far as I can tell without NIST-certified standards), and a new coat of paint on the cabinet, thanks to the OEM-quality Tek Blue paint formulated by Stan Griffiths W7NI.

Parenthetically, this was the first time I'd used Stan's paint on anything, and I highly recommend it to any Tek scope owners who want to clean up their gear. I was impressed with the color match and finish quality; the photos in the auction don't really do it justice. Drop Stan a line at w7ni (at) easystreet.com if interested.

Operating/service manuals and the 18-40 GHz waveguide mixers are included.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2516867840

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2117. Re: 10ghz doppler gun unit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 02:57:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.18e02b04fb593131989687@news-central.giganews.com>
Source record: 36821

In article <1046824812.19779@auth2.dns.griffin.net.uk>,
zen@lineisp.co.uk says...
> what does the slotted plate infront of the doppler unit do??why do some have
> this feature and some dont??would range be increased if this window is
> removed..
>

Possibly an attenuator to control the amount of locally-generated RF
seen by the Schottky mixer diode?

> experimenting with 10ghz for the first time..looking to build simple
> data/audio link to work over 5miles or so to my mates g6dhs...wont be using
> mixer side of doppler units..have various units sofan marconni etc..intend
> to use lnb plus sat can for rx..
>
> also any homebrew 10ghz frequency counter designs??
>

From what I've seen, police radar detectors seem to be respond to X-band
signals around 60 MHz either side of 10.525 GHz. You might set one
Gunnplexer to the middle of that band, and then use the IF to tune
another one relative to it. Rotate the tuning screw clockwise to lower
the output frequency.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2118. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 05:51:18 UTC
From: Carl Clawson <carlclawson@earthlink.net>
Message-ID: <qtyda.6000$jA2.623496@newsread2.prod.itd.earthlink.net>
Source record: 36822

Anyhow, back to my original topic,
news:sZLca.2516$jA2.234669@newsread2.prod.itd.earthlink.net...

I resolved most of my confusion. Some of it was a simple error in computing Q1's bias point. Another error was using the little high-frequency transistor model that you find in chapter 1 of Solid State Design. It shows a current gain of fT/f and an input resistance of 26 mV * (fT/f) / IE. Well, if you instead use the hybrid-pi model and approximate it well above fT/beta, you get these formulas except for a phase shift of 90 degrees. So the input "resistance" in the picture is really the impedance of the base-emitter capacitance itself, not an ohmic resistance shunting it.

Correcting all that, I come up with roughly 50 pF for the BE capacitance. With the 100 pF of C2 in series, you're close to 30 pF. (It will be device-dependent due to fT variations.) Then there's a catch: the crystal in the Pierce oscillator is series resonant, so the analysis is a bit different than I had thought. But it turns out that you want the series capacitance combination to match the load capacitance of the crystal, so 30 pF is about right.

Thanks again to the folks who pointed me to some references here. I'll throw out a couple more that I found helpful.

http://www.microchip.com/download/appnote/rfpic/00826a.pdf
http://www.icmfg.com/crystaloscillatordata.html

73, Carl WS7L

2119. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 06:35:19 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e75dd4e$0$27940@echo-01.iinet.net.au>
Source record: 36890

We have done some work on the Tayloe mixer - it appears to act as quite a good filter at carrier frequency. You can mix the signal back up to the carrier or an IF frequency with a second mixer in reverse. I am not sure how it goes at harmonics - presumably it will have a spurious response as the LO drive is 4 digital signals. I am designing just such a receiver at present Rod Green (VK6KRG) has tried this concept on 7 MHz with a Tayloe mixer frontend and an IF at 455 KHz. You get SSB rejection of about 40 dB without any special balancing of the 4 signal paths. The beauty of this setup is that there are no phase shift networks in the audio path. He claims MDS for 20dB SINAD was -110dBm and mixer 1 dB compression was about 0 dBm. (FST3125 mixer with no RF amp) It has good adjacent signal performance due to the inherent attenuation of off channel signals - in short the ideal reciever topology!
Has anyone else got experience with this setup?

Richard

Jan Wagner <jwagner@lyta.hut.fi> wrote in message
news:Pine.OSF.4.50.0303171531510.50591-100000@lyta.hut.fi...
> Hi,
>
> i'd like to build a frequency controlled filter into an rf preamp.
> It's for a direct conversion receiver 0-50MHz, and the LO frequency should
> control the input rf bandpass filter center frequency. The filter
> pass band bandwidth is fixed.
>
> Are switched capacitor filters any good for this? Or a Tayloe mixer style
> setup working as a bandpass filter? Maybe someone has already tried one of
> these? (google showed some postings on the topic but not much else than
> speculations)
> Or are there some "really simple" frequency-controlled RF bandpass filter
> alternatives which I just missed?
>
> Thanks!
>
> - jfw
>
> --
> **
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR
>

2120. FS: Transformer 7.5V at 51 Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 09:39:06 UTC
From: Stap Rinks <sabbatai_zvi@hotmail.com>
Message-ID: <44qd7vgctc52tijbla0splummgf0ff6ogq@4ax.com>
Source record: 36823
Cross-posted to: rec.radio.amateur.homebrew,rec.audio.tubes

FOR SALE - Filament Transformers

Ready to build that BIG final amp?
Suitable for linear amplifier, repeater amplifier project etc.
Ideal for 3CX3000 Amplifier and other 7.5V tubes such as 8161,
3CX2500A3, 3CX2500D3, 3CX1000A3, Pair of 3CX1200A7 etc.

Thordarson 21F26 Transformer.
Top Quality. 115/230V AC Primary 50/60 Hz
to 7.5 Volts C.T. at 51 Amps.

Dimensions: 5" wide X 4.5" Deep X 4" tall

Will sell for $110.00 plus shipping

E-mail me to arrange purchase

http://come.to/AF4K/

2121. Realistic DX-440 shortwave receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 13:08:40 UTC
From: Tom S <t_stenbraaten@hotmail.com>
Message-ID: <0i6e7vk4i3km5gvgujr38k0qn2ucol0ckm@4ax.com>
Source record: 36824

I've got a Realistic DX-440 shortwave receiver currently on Ebay for
sale # 3013876349. It's in excellent shape . Go check it out.

2122. Re: Kenwood Mic MC-50 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 14:09:33 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <d1ae7v4i6e9at2k8b13olmnqgichc8otru@4ax.com>
Source record: 36825

On Mon, 17 Mar 2003 16:05:11 -0800, Dan Richardson
<k6mhe@mendolink.com> wrote:

>I have lost my documentation for an old Kenwood MC-50 Microphone and
>need to know how to select hi or low impedance settings.
>
>There is a red dot on the plug which goes into the microphone. I know
>if the dots between the microphone and plug are in alignment is for
>one setting (high or low Z), but I don't remember which is which.
>
>Can anyone out there help me out?
>
>Thanks
>Danny, K6MHE

Thanks to Hans, OZ2HNS I now have a copy of the manual. No need for
others to respond.

73

Danny, K6MHE

2123. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 15:51:00 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <kk8e7vs178c4am1quu3366qdh5gpck4dp8@4ax.com>
Source record: 36826

On Tue, 18 Mar 2003 05:51:18 GMT, "Carl Clawson"
<carlclawson@earthlink.net> wrote:

|Anyhow, back to my original topic,
| news:sZLca.2516$jA2.234669@newsread2.prod.itd.earthlink.net...
|
|I resolved most of my confusion. Some of it was a simple error in computing
|Q1's bias point. Another error was using the little high-frequency
|transistor model that you find in chapter 1 of Solid State Design. It shows
|a current gain of fT/f and an input resistance of 26 mV * (fT/f) / IE.
|Well, if you instead use the hybrid-pi model and approximate it well above
|fT/beta, you get these formulas except for a phase shift of 90 degrees. So
|the input "resistance" in the picture is really the impedance of the
|base-emitter capacitance itself, not an ohmic resistance shunting it.
|
|Correcting all that, I come up with roughly 50 pF for the BE capacitance.
|With the 100 pF of C2 in series, you're close to 30 pF. (It will be
|device-dependent due to fT variations.) Then there's a catch: the crystal in
|the Pierce oscillator is series resonant,

Not by my definition. That may be what Microchip states in places in
the reference you cite below but their own figure 6 (and verbage in
"Specifying a Crystal") proves otherwise. The crystal is operated
above series resonance and below anti-resonance and is for all intents
an inductor. He's a test. If you can't replace the crystal with a
resistor equal to ESR and have the circuit still oscillate, it's *not*
series resonant.

In other words, the crystal is required to supply some phase shift to
satisfy Barkhausen, and it isn't zero degrees.

| so the analysis is a bit different
|than I had thought. But it turns out that you want the series capacitance
|combination to match the load capacitance of the crystal, so 30 pF is about
|right.
|
|Thanks again to the folks who pointed me to some references here. I'll throw
|out a couple more that I found helpful.
|
|http://www.microchip.com/download/appnote/rfpic/00826a.pdf
|http://www.icmfg.com/crystaloscillatordata.html
|
|
|73, Carl WS7L
|

2124. RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 16:13:45 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v7ehe07vdupb40@corp.supernews.com>
Source record: 36827

The July 95 issue of RadCom had a construction article titled "RF Impedance Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue and would like a copy of the article. Any help appreciated.
tnx
hank wd5jfr

2125. Re: RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 17:03:41 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e77513b.26007230@news.freeserve.net>
Source record: 36828

On Tue, 18 Mar 2003 10:13:45 -0600, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>The July 95 issue of RadCom had a construction article titled "RF Impedance
>Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue
>and would like a copy of the article. Any help appreciated.
>tnx
>hank wd5jfr
>
I think I got it Hank, If so I'll scan and send in a day or two.
hth Mike W

2126. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 17:25:16 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.0303181826400.242020-100000@kosh.hut.fi>
Source record: 36829

On Mon, 17 Mar 2003, Richard Hosking wrote:
> We have done some work on the Tayloe mixer - it appears to act as quite a
> good filter at carrier frequency.

Thanks!
It's a good filter on the audio freq side, but I'd need the quadrature
outputs. And input RF amplification, to use my existing dual AD831 I/Q
mixer board (dead-weak reception with no preamp).

My "idea" is:

```
RF ___
/ \
------/ \-------------------
^
| filter f_c == LO I or Q
| bandwidth = 200 kHz, maybe
|
+-> rf preamp --> 2 x AD831 mixer --> I & Q AF
^
|
LO I and Q
```

About the Tayloe mixer:

> You can mix the signal back up to the
> carrier or an IF frequency with a second mixer in reverse. I am not sure how
> it goes at harmonics - presumably it will have a spurious response as the LO
> drive is 4 digital signals.

Probably lot's of digital clock feedthrough - switch gate capacitances -
into the output. But these seem to be below -30dB
(http://www.hut.fi/~jwagner/dc-rx/N-path-SC_bandpass.pdf)

Maybe it works. OTOH, odd, two mixers for down and then up conversion, and
then a RF preamp, and after that, quadrature mixer.
Highly unconventional... ;-) Well, if I can't invent anything ingenious
of my own, that'll have to do. Though I've some doubts about the
performance of such a setup.

But the Tayloe mixer (or N-path filter) gave an idea - modify it into a
band reject filter, so all out-of receiving band signals are terminated
on the output side of the mixer. And amplify the remaining in-band signal
from the input side of the mixer. I'll give that one a try.

> I am designing just such a receiver at present
> Rod Green (VK6KRG) has tried this concept on 7 MHz with a Tayloe mixer

> frontend and an IF at 455 KHz. You get SSB rejection of about 40 dB without
> any special balancing of the 4 signal paths. The beauty of this setup is
> that there are no phase shift networks in the audio path. He claims MDS for
> 20dB SINAD was -110dBm and mixer 1 dB compression was about 0 dBm. (FST3125
> mixer with no RF amp) It has good adjacent signal performance due to the
> inherent attenuation of off channel signals - in short the ideal reciever
> topology!

Sounds very good. 8-)

It didn't use the 455kHz IF for a second upconversion, though? ;)

Ok - any thoughts on how to use the AD9854 for this? Are four ultrafast
analog comparators sufficient? (square up the I, Q, inverted I and Q?)
If yes - have you used fast comps in your setup? NE521, other?

many thanks!!

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2127. QST Articles

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 18:19:54 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <erJda.4410$ES3.4291264@kent.svc.tds.net>
Source record: 36830
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi All,
Does anyone have these articles or could scan them and email to me?

May 1998 QST pg44 "A UHF Amplifier From Scratch" - Feedback
Aug 1987 QST pg 24 "A UHF Amplifier From Scratch"
Oct 1972 QST pg 31 "A 75-Watt. Solid-State. UHF Amplifier"

Thanks in advance,
Jeff Weinberg W8CQ
Harbach Electronics
(317) 892-2641
harbachelectronics@tds.net
http://www.harbachelectronics.com

2128. Re: RF Imp Br RadCom 7/95?.. done

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:04:43 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e7789c9.1550654@news.freeserve.net>
Source record: 36831

On Tue, 18 Mar 2003 10:13:45 -0600, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>The July 95 issue of RadCom had a construction article titled "RF Impedance
>Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue
>and would like a copy of the article. Any help appreciated.

Now done. hth.

2129. Re: RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:05:21 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e778a06.1611217@news.freeserve.net>
Source record: 36832

On Tue, 18 Mar 2003 10:13:45 -0600, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>The July 95 issue of RadCom had a construction article titled "RF Impedance
>Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue
>and would like a copy of the article. Any help appreciated.

now done. hth

2130. Re: RF Imp Br RadCom 7/95?.. done

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:06:06 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e778a19.1630043@news.freeserve.net>
Source record: 36833

Sorry, I did'nt mean to start another thread.. please ignore
--
On Tue, 18 Mar 2003 21:04:43 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>On Tue, 18 Mar 2003 10:13:45 -0600, "Henry Kolesnik"
><wd5jfr@oklahoma.net> wrote:
>
>>The July 95 issue of RadCom had a construction article titled "RF Impedance
>>Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue
>>and would like a copy of the article. Any help appreciated.
>
>Now done. hth.

2131. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:10:21 UTC
From: averyfineman@aol.com
Message-ID: <20030318161021.15648.00001156@mb-md.aol.com>
Source record: 36834

In article <b51mv9$23u16g$1@ID-150848.news.dfncis.de>, "Richard"
<nearlynews_email@ntlworld.com> writes:

>"Roy Lewallen" <w7el@eznec.com> wrote in message
>news:v78mvocos14o12@corp.supernews.com...
>> Have you read Chapter 3 in _Experimental Methods in RF Design_?
>>
>> Roy Lewallen, W7EL
>
>No, but it seems that it would be good to.
>
>Of course a big part of my knowledge gap is the part dealing with
>xtal manufacturers . Maybe there is no other way but to actually
>deal with a particular manufacturer, I don't know. I mean can
>you say to a xtal manufacturer, "Please make a crystal with a
>motional inductance (L1) of 45mH, motional capactance (C1) of
>20fF, and ESR (R1) of 38 Ohms? These issues are what I'm
>alluding to. In fact, I don't think you can specify a particular
>value of C1 for a manufacturer to fulfill. Rich.

For an idea of the ranges of all crystal parameters, try
prowling the document pages at the Corning Frequency
Control website. www.corningfrequency.com

Try other quartz crystal unit makers' sites for similar data.

Quartz crystal unit manufacturers cannot supply exact values
of the equivalent electrical circuit other than frequency. The
values of things like motional capacitance is a consequence
of many interrelated factors. Manufacturers wind up with the
equivalent circuit "component" values within certain ranges.

Applying those ranges to oscillator circuits requires mainly
recognizing a very low impedance across the unit (series
resonance) or a very high impedance (parallel resonance)
and picking the right circuit to accommodate that. Parallel
resonance applications have a specified external circuit
capacitance for the frequency desired by the customer.

Parallel resonance of a quartz crystal unit is dependent both
on equivalent quartz unit parallel capacity and that of its
holder AND the external circuit capacity. That allows
addition of a parallel trimmer capacitor to "set" the desired
frequency in-circuit. That settability is only a few tens of
parts per million.

Series resonance is almost entirely a function of the quartz unit by itself. Addition of a series capacitance in the circuit does allow some trimming but that trimmability is of lesser range than with the parallel resonance circuit.

Len Anderson
retired (from regular hours) electronic engineer person

2132. Re: Very happy with "experiments" circuit results!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:27:26 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <gaMda.1123$7X4.907@newsfep1-gui.server.ntli.net>
Source record: 36835

> And they all complaint about that HAM parts is hard to
> find these days.
>
> Regards Max

Exactly, but as the old saying goes, "Seek and thou shalt find!"
or putting it another way, "There are none so blind as those
that will not see!"

73

Duncan G4DFV

2133. Re: RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:54:44 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v7f5daiqr6lva1@corp.supernews.com>
Source record: 36836

thanks to Alan and Mike I have 2 scans.
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v7ehe07vdupb40@corp.supernews.com...
> The July 95 issue of RadCom had a construction article titled "RF
Impedance
> Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that
issue
> and would like a copy of the article. Any help appreciated.
> tnx
> hank wd5jfr
>
>

2134. Re: IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 21:55:24 UTC
From: donrm@soco.agilent.com
Message-ID: <1048033525.49581@cswreg.cos.agilent.com>
Source record: 36843

Woody <KZ4AK@munged.att.net> wrote:
>
> Just got new Icom V8000 (no mods) and programming software. The $35
> cable (DB9 - 1/8" Phone to Radio) seemed a truly poor value for a
> homebrewer. I didn't order, but built one. Assuming shaft ground, I
> looked at the tip & ring at the V8000 with a scope. On turn on there
> was a burst of data from the "tip" line - Ah! Tx out from the Icom.
> The ring was steady at +5v - Ah! the RX line. Simple, made cable -
> Tip to DB9 pin 2, Ring to DB9 pin 3, shank (shield) to pin 5.

If this is the RTS software, the interconnect cable is not as simple
as it seems - there is level changing/logic circuitry inside the DB9
connector housing...at least this is the way it is set up for my IC-2000.

73 Don K6LTS
donrm@soco.agilent.com

2135. WANTED: 18v 20 amp transformers for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 23:26:29 UTC
From: Tracy Fort <tracy.fort@gimail.af.mil>
Message-ID: <sraf7vs7kuk32qbodc15t2s05613qb9dtd@4ax.com>
Source record: 36837

20 to 25 amp....18volt output

120vac in 18v out..

anybody have one that they would be willing to sale at a decent price?

Trying to build a ham radio power supply..

please email me...

Thanks,

Tracy
Tracy Fort

KE4ODD

tracy.fort@gimail.af<NOSPAM>.mil

remove <NOSPAM> for repliess

2136. Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 23:46:15 UTC
From: Roger <socool@sk.sympatico.ca>
Message-ID: <3E77AFC7.315A36E4@sk.sympatico.ca>
Source record: 36838

Can computer power supplies be used as power supplies for radios? Seems like a pity to just throw out all those good computer power supplies. Any ideas what else they might be used for?

2137. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-18 23:56:41 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <lbcf7vccsaj87ui14ilksror66674uhoc1@4ax.com>
Source record: 36839

On Tue, 18 Mar 2003 17:46:15 -0600, Roger <socool@sk.sympatico.ca>
wrote:

>Can computer power supplies be used as power supplies for radios? Seems
>like a pity to just throw out all those good computer power supplies.
>Any ideas what else they might be used for?
>
There was a recent article in QST about how to do that, and a recent
thread here as well.

If you do lots of electronics tinkering, you might want to have
multiple power supplies in one package. Might have to add a little
filtering.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2138. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 00:02:52 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E77B3AC.6000205@PAMyahoo.ca>
Source record: 36840

Roger wrote:
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>

I'll scan it for you if you want..
Contact me..ve3jua@rac.ca

2139. Re: QST Articles

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 00:04:07 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E77B3F7.3020305@PAMyahoo.ca>
Source record: 36841
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Jeff Weinberg W8CQ wrote:
> Hi All,
> Does anyone have these articles or could scan them and email to me?
>
> May 1998 QST pg44 "A UHF Amplifier From Scratch" - Feedback
> Aug 1987 QST pg 24 "A UHF Amplifier From Scratch"
> Oct 1972 QST pg 31 "A 75-Watt. Solid-State. UHF Amplifier"
>
> Thanks in advance,
> Jeff Weinberg W8CQ
> Harbach Electronics
> (317) 892-2641
> harbachelectronics@tds.net
> http://www.harbachelectronics.com
> ----------
> I could do that for you.
Please contact me.
ve3jua@rac.ca

2140. practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 00:10:06 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3e77b30a_2@corp-news.newsgroups.com>
Source record: 36842

Hi all

I'm about to try building an code prectise oscillator. The front end (simplified) of my design is here: http://www.ott.igs.net/~jcb/misc/osc/Osc.tif The idea is to have a choice of three tones so that it doesn't get too monotonous. My question is; I understand the concept of the voltage divider in a colpitts osc, but can't find any books which discuss the impact of a much larger cap across the inductor and how that affects the value of the voltage divider caps. My thinking is that the tank circuit, which is composed of the two trimmers making the voltage divider parallelled (sp?) with the switched in/out caps tanked with the inductor, will form a tank circuit unto themselves and the trimmers will work as dividers regardless because they are the only caps between grid/plate and grid/cathode So how wrong am I?

cheers

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2141. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 00:39:47 UTC
From: DrGrok@mungednet.com
Message-ID: <b58e1a$g0a$2@bob.news.rcn.net>
Source record: 36844

Keep in mind that these are usually (always?) switching supplies. You might
want to consider ways to synchronize the switching with an external source and
then tune it to move any birdies out of the band of interest.

Dr. G.

In article <lbcf7vccsaj87ui14ilksror66674uhoc1@4ax.com>, Idontwantspam@net
wrote:
>On Tue, 18 Mar 2003 17:46:15 -0600, Roger <socool@sk.sympatico.ca>
>wrote:
>
>>Can computer power supplies be used as power supplies for radios? Seems
>>like a pity to just throw out all those good computer power supplies.
>>Any ideas what else they might be used for?
>>
>There was a recent article in QST about how to do that, and a recent
>thread here as well.
>
>If you do lots of electronics tinkering, you might want to have
>multiple power supplies in one package. Might have to add a little
>filtering.
>
>Happy trails,
>Gary (net.yogi.bear)
>---
>at the 51st percentile of ursine intelligence
>
>Gary D. Schwartz, Needham, MA, USA
>Please reply to: garyDOTschwartzATpoboxDOTcom

2142. Re: practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 00:49:42 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3e77bc4e_2@corp-news.newsgroups.com>
Source record: 36845

John Bartley wrote:
> I understand the concept of the voltage divider in a colpitts osc,
>

Really I do, but I drew the schematic wrong - oops.

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2143. Source of CHEAP amphenol 8 pin connectors found!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 01:14:13 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E77C465.FAD1FCD6@osite.com.br>
Source record: 36846

I found a source of amphenol 97 series connectors in Brazil,
they sell for USD 1.16 each

97-3106A-20-7S (socket, 8 contacts), without cable clamps,
with
plastic cap
97-3102A-20-7P (chassis mount, 8 contacts), with plastic cap

Almost all in original packaging, mint or near-mint
condition, seems never used.

I've seen some cable clamps, but I was not able to determine
their part numbers.

I want to know if you have any interest on these items.
I can buy myself then ship via UPS/FEDEX or express mail.

I bought myself a dozen, since this is a very hard-to-find
item here.
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2144. Re: IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 01:34:57 UTC
From: "Gary P. Fiber" <g.fiber@verizon.net>
Message-ID: <o2if7vohl6592ga6hjksdh9e4en5qdarns@4ax.com>
Source record: 36747

On Tue, 18 Mar 2003 21:55:24 +0000 (UTC), donrm@soco.agilent.com
wrote:

>Woody <KZ4AK@munged.att.net> wrote:
>>
>> Just got new Icom V8000 (no mods) and programming software. The $35
>> cable (DB9 - 1/8" Phone to Radio) seemed a truly poor value for a
>> homebrewer. I didn't order, but built one. Assuming shaft ground, I
>> looked at the tip & ring at the V8000 with a scope. On turn on there
>> was a burst of data from the "tip" line - Ah! Tx out from the Icom.
>> The ring was steady at +5v - Ah! the RX line. Simple, made cable -
>> Tip to DB9 pin 2, Ring to DB9 pin 3, shank (shield) to pin 5.
>
>If this is the RTS software, the interconnect cable is not as simple
>as it seems - there is level changing/logic circuitry inside the DB9
>connector housing...at least this is the way it is set up for my IC-2000.
>
>73 Don K6LTS
>donrm@soco.agilent.com

I did not read the first message from Woody completely when I first
replied. Did not realize he was trying for a direct connect from the
serial port. You are correct Don, he needs to have a RS-232 to TTL
level convertor between the serial port and the radio. Icom uses just
a couple of transistors. There are many designs on the " net " too for
such a device including some using a MAX-232 chip.

Gary K8IZ

2145. FA :Re: Realistic DX-440 shortwave receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 01:49:02 UTC
From: Willis and Suzie Whatley <whatley@frii.com>
Message-ID: <3e77cc8e$0$198$75868355@news.frii.net>
Source record: 36748

List as FA:

2146. Re: IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 02:23:25 UTC
From: Woody <KZ4AK@REMOVEthis.att.net>
Message-ID: <3E77D4AE.508E5873@REMOVEthis.att.net>
Source record: 36749

Thanks All,

Subsequent research also indicated the same... Level
conversion/buffers. No trouble to build, just hope I didn't toast the
v8000 I/O. True RS-232 is pretty robust (the PC com ports are fine),
but don't know 'bout the radio. At least it otherwise seems to work
well. ...Was a bit naive when the interface was referred to as RS-232
at some point when I was checking out the radio capabilities.

Another characteristic in the data I found is a single bi-directional
line rather than (2) Rx/Tx lines. The ring is typically shown to be
active, not the tip. On power-up, however, the 'scope did show what
appeared to be a short data burst(?) of just a few bits from the tip
line. The ring went to TTL Hi (+5) and remained static. Any
Comments???

Tnx agn,
Woody

<<SNIP>>
You are correct Don, he needs to have a RS-232 to TTL
> level convertor between the serial port and the radio. Icom uses just
> a couple of transistors. There are many designs on the " net " too for
> such a device including some using a MAX-232 chip.
>
> Gary K8IZ

--
My website: http://woody.white.home.att.net/
KZ4AK - Homebrew Ham/Electronics Projects &
Eclectic Scanning Electron Microscope Images

2147. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 02:42:36 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v7fma8oce9df63@corp.supernews.com>
Source record: 36750

A while back there were a series of articles in the QRP publications about converting these supplies. They were referred to as "St. Louis Switcher" supplies. Unfortunately, when I google on anything like that, I come up with hundreds of Missouri power supply manufacturers, but I know there's some stuff on the web.

You might try grazing the NJQRP and QRPARCI sites.

..

"Roger" <socool@sk.sympatico.ca> wrote in message news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

2148. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 04:36:31 UTC
From: Lou <tech@dp.net>
Message-ID: <b58s5k$1bl2$1@news.dp.net>
Source record: 36751

I know of a few who used them for 2 way radios, ham, power supplies for shop bench, etc. Have a few here if anyone is in need. $5 each plus shipping.

--
Lou/Tech@DP.NET

C.L. Furlong Enterprises
P.O. Box 289
514 Railroad St.
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Tech@DP.NET

Electronics Plus: Radio Repairs, FCC Licenses, Components, Cable, etc.
Gifts and More: Gift items & Fundraisers.

We sell NEW AND USED. Store - Online - E-Bay. Pay by - Cash, Check, Money Order - Postal - Bank - CU only. "PA residents must pay 6% Sales Tax"
Checks must clear before shipping
"Roger" <socool@sk.sympatico.ca> wrote in message
news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

2149. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 04:51:20 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b58t08gsc1@freenet9.carleton.ca>
Source record: 36753

Roger (socool@sk.sympatico.ca) writes:
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>
They aren't always the best choice. Their high current is in the
5V line, and the +12V line has a lesser current. They'll require
a load to operate, so they aren't particularly useful unless you
do need the current. They are noisy in terms of RF, and the outputs
aren't always that clean.

I was accumulating them too. I kept finding them, in remains of
computers waiting for the garbage pickup, and sometimes just lying
on the sidewalk by themselves. Last year I decided I had way more
than I could ever use, even if I did have a use for them.

So I stripped them down. You get some high voltage capacitors,
if you need those. A nice high current bridge rectifier that
could be used in some other supply. Some low voltage filter capacitors,
that aren't so useful in linear supplies since they have relatively
low capacitance (around 1000uF). Some high current diodes on the secondary
side. Some power transistors, sometimes mosfets. Various other
components that might be useful in some specific cases.

But there was also the case. Many of the supplies I stripped was
a nice convenient size. Ironically, I built up three linear power
supplies in three of the cases, using transformers I'd pulled out
of other scrap equipment. I covered the back, where the fan was,
with a piece of unetched circuit board (easy to work with, and
I have more of it than scrap sheet metal). I kept the switch
and female power jack in place.

But the case is of a nice size that I can think of all kinds
of things I could built in them. Cases can often be more costly
than the parts you put inside, and such an available supply means
that one can build without much consideration to cost.

Michael VE2BVW

2150. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 04:53:13 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3E77F7D2.D14A421@edge.net>
Source record: 36752

Try:
http://www-us.semiconductors.philips.com/acrobat/datasheets/TDA1576_2.pdf
Bob, K4QQK

Pete KE9OA wrote:

> Would you happen to have the data sheet on this device? I've been trying to
> find specs on this chip for awhile, with no success. The only links to PDF
> files for this chip have come up dead.
>
> Pete
>
> J M Noeding <la8ak.xnd@online.no> wrote in message
> news:3e74c0dd.91237284@news.online.no...
> > On Sun, 09 Jun 2002 20:18:24 GMT, "Clifton T. Sharp Jr."
> > <clifto@clifto.com> wrote:
> >
> > >J M Noeding wrote:
> > >> <clifto@clifto.com> wrote:
> > >> >If you like, I can put it up on my site for general access.
> > >> >
> > >> Yes, it would be nice if you would do so, tnx.
> > >
> > >http://www.clifto.com/TDA1576_cct.gif
> > >
> > tnx, but you'll find it on http://home.online.no/~la8ak/7a.htm
> >
> >
> > --
> > remove ,xnd to reply

2151. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 06:28:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <1g3g7vg5lsrhquho8nrp9u7ivnhr0mn878@4ax.com>
Source record: 36754

On 19 Mar 2003 04:51:20 GMT, et472@FreeNet.Carleton.CA (Michael Black) wrote:

>They aren't always the best choice. Their high current is in the
>5V line, and the +12V line has a lesser current. They'll require
>a load to operate, so they aren't particularly useful unless you
>do need the current. They are noisy in terms of RF, and the outputs
>aren't always that clean.

You could try to connect three identical (+5 V) power supplies in series to get +15 V and use a linear regulator (series pass transistor) to drop the voltage to 13.8 V, this series pass transistor also reduces the noise on the power rail. The base circuitry of the series pass transistor could be driven by the +12 V of the topmost power supply, thus 1.2 V Vce voltage drop across the series pass transistor could be realistic (still below saturation), even if the Vbe drop is 1.5 V or more.

However, the problem with many (most/all ?) PC power supplies is that the 0 V DC line is connected to the enclosure, thus this connection must be removed, so that all the enclosures can be connected in parallel to the safety ground on the primary side.

Paul OH3LWR

2152. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 09:18:25 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b59cl2$237tm9$1@ID-61331.news.dfncis.de>
Source record: 36755

I use one to power my homebrew station. See photograph:
http://www.hanssummers.com/radio/g0upl/qsl/index.htm, the ex-Compaq PSU is re-cased in an aluminium box on the left. It has appropriate connectors on the front panel for general workbench use, and also a socket on the back which connects to the radio.

In use I haven't had any noise problem. I tried my old linear PSU http://www.hanssummers.com/electronics/equipment/psu/index.htm, which sounded identical except for significant 50Hz hum which is absent with the switch-mode supply.

They do require a minimum current drain. It seems to work Ok placing a high wattage low-value resistor across the 5V and GND (i.e. you don't need to take minimum current from all voltage outputs). I uses 10-ohm 10-watt.

I am also using PC power supplies for this large LED display project I'm making for my employer http://www.hanssummers.com/electronics/equipment/riskometer/index.htm. The peak current consumption of the 17,600 LED's is 5V @ 100A, so they are connected in 4 banks, each supplied by a standard 300W computer PSU. There are also LM75 temperature monitors with automatic relay cut-off in case of problems. These PSU's are also Ok with 10-ohm, 10-watt resistors. Without the resistors the PSU just cuts out.

73

Hans

"Roger" <socool@sk.sympatico.ca> wrote in message news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

2153. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 12:02:09 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0303190402.7942fec2@posting.google.com>
Source record: 36756

Paul Keinanen <keinanen@sci.fi> wrote in message
news:<1g3g7vg5lsrhquho8nrp9u7ivnhr0mn878@4ax.com>...
> On 19 Mar 2003 04:51:20 GMT, et472@FreeNet.Carleton.CA (Michael Black)
> wrote:
>
>
> >They aren't always the best choice. Their high current is in the
> >5V line, and the +12V line has a lesser current. They'll require
> >a load to operate, so they aren't particularly useful unless you
> >do need the current. They are noisy in terms of RF, and the outputs
> >aren't always that clean.
>
> You could try to connect three identical (+5 V) power supplies in
> series to get +15 V and use a linear regulator (series pass
> transistor) to drop the voltage to 13.8 V, this series pass transistor
> also reduces the noise on the power rail. The base circuitry of the
> series pass transistor could be driven by the +12 V of the topmost
> power supply, thus 1.2 V Vce voltage drop across the series pass
> transistor could be realistic (still below saturation), even if the
> Vbe drop is 1.5 V or more.
>
> However, the problem with many (most/all ?) PC power supplies is that
> the 0 V DC line is connected to the enclosure, thus this connection
> must be removed, so that all the enclosures can be connected in
> parallel to the safety ground on the primary side.
>
> Paul OH3LWR

For a VERY comprehensive guide to the whole subject of conversion into
something useful and RF friendly go to
www.qsl.net/vk4ba/projects/index.html

Am surprised this site hasnt had more currency.

Regards,
Andrew VK3BFA

2154. Re: IC-V8000 Serial cable trouble

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 12:08:53 UTC
From: "Gary P. Fiber" <g.fiber@verizon.net>
Message-ID: <t0ng7vscmiupv25mqkid02s5sq5rmjopud@4ax.com>
Source record: 36757

On Wed, 19 Mar 2003 02:23:25 GMT, Woody <KZ4AK@REMOVEthis.att.net>
wrote:

>Thanks All,
>
>Subsequent research also indicated the same... Level
>conversion/buffers. No trouble to build, just hope I didn't toast the
>v8000 I/O. True RS-232 is pretty robust (the PC com ports are fine),
>but don't know 'bout the radio. At least it otherwise seems to work
>well. ...Was a bit naive when the interface was referred to as RS-232
>at some point when I was checking out the radio capabilities.
>
>Another characteristic in the data I found is a single bi-directional
>line rather than (2) Rx/Tx lines. The ring is typically shown to be
>active, not the tip. On power-up, however, the 'scope did show what
>appeared to be a short data burst(?) of just a few bits from the tip
>line. The ring went to TTL Hi (+5) and remained static. Any
>Comments???
>
>Tnx agn,
>Woody
>
>
><<SNIP>>
> You are correct Don, he needs to have a RS-232 to TTL
>> level convertor between the serial port and the radio. Icom uses just
>> a couple of transistors. There are many designs on the " net " too for
>> such a device including some using a MAX-232 chip.
>>
>> Gary K8IZ

Woody,

Yes the cloning connection is a single line. The cpu is generally feed
with two transistors, one for inbound data and one for outbound data.
Both are attached to the same data line. I don't remember the actual
data level on the radio when you power it up. I am not aware of any
changes in the cloning system over the various model changes.
Any Icom mobile with cloning should act the same as the V8000.

Gary K8IZ

2155. Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 13:05:39 UTC
From: "owen.home" <owen.home@ntlworld.com>
Message-ID: <1YZda.304$vF.57772@newsfep1-win.server.ntli.net>
Source record: 36758
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Help
I need to find some GR type 774 connectors for a recently found 916-A RF bridge, I don't think I've ever seen any here in the UK. I'd appreciate any help or pointers including dimensions of the connector in case I have to make some, I'm thinking of maybe turning down the thread on an SO239 barrel (i.e. socket to socket) as a short term measure.
I'd also welcome any comments on the 916-A bridge from anyone with experience of using one, the construction looks amazing. What would you think of running it with a modulated noise source generator?
I didn't get the two "unknown" connecting cables (long and short), the manual tells me they have 250ohm resistors in series - do you see any problems with making my own? I guess I should try it and see if I can balance the bridge.
Thanks
John

2156. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 13:54:49 UTC
From: Leigh W3NLB <w3nlbREMOVETHIS@amsat.org>
Message-ID: <fcsg7vsb7b0m4s1bkg6bjl0oj6girpeo7a@4ax.com>
Source record: 36760
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Are you sure this isn't an 874? I've never heard of a 774, but there
are things in this world that I've not heard of ;-)

The 874 is a hermaphroditic connector. Any one will mate with any
other. There is no concept of male and female. The barrel is divided
into four segments, two are pushed in, and two pushed out, so if you
rotate the connector 90 degrees, you get a mating orientation. The
center conductor is simiilarly arranged.

You can find these all the time on ebay. They're not expensive. The
connector is rated for operation to 7.4 GHz (hence the name). The
simplest thing is to get adapters to BNC or such.

Search for 874 in Business & Industrial > Test, Measurement Equipment

There's an attenuator on ebay at the moment which includes two
874-to-BNC adapters, two 875-to-PL259 adapters and a 50-ohm terminator
with an 874 connector. The attenuator itself might be of interest.
And it's in the UK. See

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3013904397&category=1502

I'll try to dig up some info on the 916 bridge.

73 de Leigh W3NLB

On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
<owen.home@ntlworld.com> wrote:

>Help
>I need to find some GR type 774 connectors for a recently found 916-A RF
>bridge, I don't think I've ever seen any here in the UK. I'd appreciate any
>help or pointers including dimensions of the connector in case I have to
>make some, I'm thinking of maybe turning down the thread on an SO239 barrel
>(i.e. socket to socket) as a short term measure.
>I'd also welcome any comments on the 916-A bridge from anyone with
>experience of using one, the construction looks amazing. What would you
>think of running it with a modulated noise source generator?
>I didn't get the two "unknown" connecting cables (long and short), the
>manual tells me they have 250ohm resistors in series - do you see any
>problems with making my own? I guess I should try it and see if I can
>balance the bridge.
>Thanks
>John
>
>

2157. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 15:01:05 UTC
From: "owen.home" <owen.home@ntlworld.com>
Message-ID: <gE%da.484$vF.77600@newsfep1-win.server.ntli.net>
Source record: 36761
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Leigh
Thanks for the reply, the connector is not the hemaphrodite type and the manual details it as a 774 series, it is from the 1940s so I guess it's an earlier type. The panel connector has a recessed hole about 1/2" diameter with a sunken centre pin, there is a lip raised above the panel around the hole which may mate with an outer sleeve on the cable jack - shouldn't be too hard to fabricate something.
Thanks
John

"Leigh W3NLB" <w3nlbREMOVETHIS@amsat.org> wrote in message news:fcsg7vsb7b0m4s1bkg6bjl0oj6girpeo7a@4ax.com...
> Are you sure this isn't an 874? I've never heard of a 774, but there
> are things in this world that I've not heard of ;-)
>
> The 874 is a hermaphroditic connector. Any one will mate with any
> other. There is no concept of male and female. The barrel is divided
> into four segments, two are pushed in, and two pushed out, so if you
> rotate the connector 90 degrees, you get a mating orientation. The
> center conductor is simiilarly arranged.
>
> You can find these all the time on ebay. They're not expensive. The
> connector is rated for operation to 7.4 GHz (hence the name). The
> simplest thing is to get adapters to BNC or such.
>
> Search for 874 in Business & Industrial > Test, Measurement Equipment
>
> There's an attenuator on ebay at the moment which includes two
> 874-to-BNC adapters, two 875-to-PL259 adapters and a 50-ohm terminator
> with an 874 connector. The attenuator itself might be of interest.
> And it's in the UK. See
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3013904397&category=1502
>
> I'll try to dig up some info on the 916 bridge.
>
> 73 de Leigh W3NLB
>
> On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
> <owen.home@ntlworld.com> wrote:
>
> >Help

> >I need to find some GR type 774 connectors for a recently found 916-A RF
> >bridge, I don't think I've ever seen any here in the UK. I'd appreciate
any
> >help or pointers including dimensions of the connector in case I have to
> >make some, I'm thinking of maybe turning down the thread on an SO239
barrel
> >(i.e. socket to socket) as a short term measure.
> >I'd also welcome any comments on the 916-A bridge from anyone with
> >experience of using one, the construction looks amazing. What would you
> >think of running it with a modulated noise source generator?
> >I didn't get the two "unknown" connecting cables (long and short), the
> >manual tells me they have 250ohm resistors in series - do you see any
> >problems with making my own? I guess I should try it and see if I can
> >balance the bridge.
> >Thanks
> >John
> >
> >
>

2158. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 15:12:49 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <y8acnUfh4q5tFeWjXTWcoA@comcast.com>
Source record: 36762
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Have you opened up theunit to see how much space there is? If all else
fails, you might consider replacing the connector with an N type, or such.

Tam/WB2TT
"owen.home" <owen.home@ntlworld.com> wrote in message
news:1YZda.304$vF.57772@newsfep1-win.server.ntli.net...
> Help
> I need to find some GR type 774 connectors for a recently found 916-A RF
> bridge, I don't think I've ever seen any here in the UK. I'd appreciate
any
> help or pointers including dimensions of the connector in case I have to
> make some, I'm thinking of maybe turning down the thread on an SO239
barrel
> (i.e. socket to socket) as a short term measure.
> I'd also welcome any comments on the 916-A bridge from anyone with
> experience of using one, the construction looks amazing. What would you
> think of running it with a modulated noise source generator?
> I didn't get the two "unknown" connecting cables (long and short), the
> manual tells me they have 250ohm resistors in series - do you see any
> problems with making my own? I guess I should try it and see if I can
> balance the bridge.
> Thanks
> John
>
>
>

2159. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 16:10:07 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3E78965F.2EF145C2@ispwest.com>
Source record: 36763

Look here..... http://www.antennex.com/preview/archive3/powers.htm

Ted in Atlanta KD4EE
Roger wrote:

> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?

2160. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 17:45:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mr7h7vk2h75kf1h3s7f35928kmb1gcvnnu@4ax.com>
Source record: 36764
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
<owen.home@ntlworld.com> wrote:

>I'd also welcome any comments on the 916-A bridge from anyone with
>experience of using one, the construction looks amazing. What would you
>think of running it with a modulated noise source generator?

Hi John,

Modulated noise source? Well, anyway, noise used as a source will
require a VERY large amplifier to work to any degree of precision.
The problem here is that noise sources suffer both from evenness of
output level across frequency for one, and low output level at any one
frequency for another.

These class of bridges will exhibit extremely deep nulls (100dB
easily) that in turn require at least drive levels of 0dBm to allow
you to find the bottom of the balance at 1ï¿½V (using a communications
receiver as the detector). 0dBM doesn't sound like much from a
source, until you spread it across the spectrum instead of offering it
to one frequency.

My noise source is a Photomultiplier tube that is weakly illuminated
by a constant illumination and offers a very wideband and flat
operation out to a hundred MHz, but needs amplification (which then
upsets this even power distribution) to do a low precision measurement
(not very satisfying). Instead, I use an HP 608F VHF Signal Generator
(actually starts at 10MHz) which has a rock solid stable output (very
important that 100dB deep nulls don't drift).

As far as connectors go, the only one that counts is the "unknown"
terminal. The source and detector can easily be converted (easily in
the sense of just go ahead and do it without concern) to any connector
technology you wish. For that matter, the "unknown" connector is (for
my bridge) a simple stud. I converted that to accept a connector (a
flying design where the center pin screws into the stud, and the shell
is supported by a sheet of copper tied off to the nearby ground
connection).

A picture of this is available on request.

73's
Richard Clark, KB7QHC

2161. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 18:13:52 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <paCsPnBgNLe+EAUC@ifwtech.co.uk>
Source record: 36767

tk wrote:
>Look here..... http://www.antennex.com/preview/archive3/powers.htm
>
>> Can computer power supplies be used as power supplies for radios? Seems
>> like a pity to just throw out all those good computer power supplies.
>> Any ideas what else they might be used for?
>
Most of these so-called "modifications" simply consist of hanging a load resistor across the 5V output and taking whatever comes from the 12V line, which is *not* regulated against current demand.

If you're using this with an SSB transceiver that really needs 13.8V at 20A to develop full undistorted output on speech peaks, you're going to be disappointed - and splattering.

The Australian article looks far better:
http://www.qsl.net/vk4ba/projects/index.html

It shows how to make the "12V" output adjustable to 13.8V, and how to move the existing voltage regulation and over/under-voltage protection features from the 5V output to the 13.8V line. You then have a fully regulated and protected 13.8V high-current supply.

It's more complicated than the "entry level" approach, but the extra effort looks well worthwhile.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2162. Re: practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 19:11:11 UTC
From: gsm@mendelson.com
Message-ID: <slrnb7hg63.r2p.gsm@cable.mendelson.com>
Source record: 36765

In article <3e77b30a_2@corp-news.newsgroups.com>, John Bartley wrote:
>
> I'm about to try building an code prectise oscillator. The front end
> (simplified) of my design is here:
> http://www.ott.igs.net/~jcb/misc/osc/Osc.tif The idea is to have a
> choice of three tones so that it doesn't get too monotonous.

That's not such a good idea. Most radios have a fixed cw offset of 700 Hz. Learn a different one and you will transmit off frequency. If you have, or plan to buy or build a rig with a different or adjustable offset, then you should play around with the one that works best for you and learn with it. But be aware that the code test is at 700 Hz.

In the end though, a practice oscilator is really only needed until you can pass the 5wpm test. Much better practice is to copy off the air, especialy while "talking" to someone.

73,
Geoff
--
Geoffrey S. Mendelson gsm@mendelson.com 972-54-608-069
Do sysadmins count networked sheep?

2163. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 19:39:53 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <dI3ea.14222$ja4.967193@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36766
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have a 0dBm nouse source design up on my website, flat from 100kHz to 1.3GHz. The URL is:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html

Pete

Richard Clark <kb7qhc@attbi.com> wrote in message news:mr7h7vk2h75kf1h3s7f35928kmb1gcvnnu@4ax.com...
> On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
> <owen.home@ntlworld.com> wrote:
>
> >I'd also welcome any comments on the 916-A bridge from anyone with
> >experience of using one, the construction looks amazing. What would you
> >think of running it with a modulated noise source generator?
>
> Hi John,
>
> Modulated noise source? Well, anyway, noise used as a source will
> require a VERY large amplifier to work to any degree of precision.
> The problem here is that noise sources suffer both from evenness of
> output level across frequency for one, and low output level at any one
> frequency for another.
>
> These class of bridges will exhibit extremely deep nulls (100dB
> easily) that in turn require at least drive levels of 0dBm to allow
> you to find the bottom of the balance at 1 V (using a communications
> receiver as the detector). 0dBM doesn't sound like much from a
> source, until you spread it across the spectrum instead of offering it
> to one frequency.
>
> My noise source is a Photomultiplier tube that is weakly illuminated
> by a constant illumination and offers a very wideband and flat
> operation out to a hundred MHz, but needs amplification (which then
> upsets this even power distribution) to do a low precision measurement
> (not very satisfying). Instead, I use an HP 608F VHF Signal Generator
> (actually starts at 10MHz) which has a rock solid stable output (very
> important that 100dB deep nulls don't drift).
>
> As far as connectors go, the only one that counts is the "unknown"
> terminal. The source and detector can easily be converted (easily in
> the sense of just go ahead and do it without concern) to any connector
> technology you wish. For that matter, the "unknown" connector is (for
> my bridge) a simple stud. I converted that to accept a connector (a

> flying design where the center pin screws into the stud, and the shell
> is supported by a sheet of copper tied off to the nearby ground
> connection).
>
> A picture of this is available on request.
>
> 73's
> Richard Clark, KB7QHC

2164. Re: practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 20:08:52 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3E78CE54.3010101@igs.net>
Source record: 36768

Geoffrey S. Mendelson wrote:
>
> That's not such a good idea. Most radios have a fixed cw offset of 700
> Hz. Learn a different one and you will transmit off frequency. If you
> have, or plan to buy or build a rig with a different or adjustable
> offset, then you should play around with the one that works best for you
> and learn with it. But be aware that the code test is at 700 Hz.
>
> In the end though, a practice oscilator is really only needed until
> you can pass the 5wpm test. Much better practice is to copy off the
> air, especialy while "talking" to someone.
>
> 73,
> Geoff

Aahhh - thank you. That answers a question that I wouldn't have known to
ask.
The idea then, if I have it correct, is to be familiar with that most
common tone so as to be comfortable tuning to it, and be able to
recognise it easily.
That would also cause less stress at exam time.

thank you again

cheers

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2165. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 21:29:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i5oh7vk4a8q0dapke7m3cnuf36occ6jg06@4ax.com>
Source record: 36769
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Wed, 19 Mar 2003 19:39:53 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>I have a 0dBm nouse source design up on my website, flat from 100kHz to
>1.3GHz. The URL is:
>http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
>
>Pete
>

Hi Pete,

Useful, I am sure, but with only 1mW across 1.3GHz, this works out to
roughly -60dBm for any frequency that is received with a 10kHz BW.
This is being quite generous, but for the purposes of driving a good
bridge, this excitation (albeit well over S9) is just not enough.

73's
Richard Clark, KB7QHC

2166. Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 21:30:44 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <tvnh7vc0me7193j4pprkqie8cprpqcsud6@4ax.com>
Source record: 36770

I'm getting ready to do some diddling (ahem, that's "heuristic engineering" if you get paid for it) with direct (or zero-IF) conversion receivers. Before I get started, something is bugging me and I can't start experimenting on something that is doomed to failure from the getgo.

Let's presume a regular old double-sideband full carrier VHF AM signal, crystal controlled. Let's presume the receiver also has a crystal controlled LO.

Given the tolerance on crystals, say a really good 0.002% over temperature, that means that the transmitter could drift somewhere around 3 kHz on 2 meters and the LO could do the same. Perhaps they would zero beat each other, but the odds are not good. Mathematically, the odds are best for a heterodyne somewhere between 1 and 2 kHz., a loud audible tone.

How do you get rid of the heterodyne, given that it will change over time, temperature, and tuning from one end of the band to the other?

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2167. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 21:46:17 UTC
From: Ake <SM2FNI.non@telia.com>
Message-ID: <Jy5ea.1263$sJ3.5173@newsb.telia.net>
Source record: 36771

"Roger" <socool@sk.sympatico.ca> skrev i meddelandet
news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

Try this: http://www.webx.dk/oz2cpu/radios/psu-pc1.htm

\Ake

2168. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 22:21:32 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <d7rh7v8egn36evl1dohh077vf4o3c4uvmc@4ax.com>
Source record: 36772

On Wed, 19 Mar 2003 13:30:44 -0800, Jim Weir <jim@rst-engr.com> wrote:

>How do you get rid of the heterodyne, given that it will change over time,
>temperature, and tuning from one end of the band to the other?

Are you asking about how to maintain good frequency control, or are
you asking how to build a costas loop?

Is the goal to build a direct conversion receiver, or to build
something simple?

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

2169. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 22:33:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7hs13h56aqh36@corp.supernews.com>
Source record: 36773

I don't think direct conversion is a good way to detect AM in a case like this, unless you can lock the oscillator onto the carrier. You might take a look into synchronous AM detection methods in which the "LO" signal applied to the mixer isn't from an oscillator, but is actually derived from the carrier, insuring perfect zero beat. I have a little Sony receiver that uses this method -- I believe it's sometimes described as "synchrodyne" detection. Hopefully someone with direct experience with AM detection can provide more detail.

Roy Lewallen, W7EL

Jim Weir wrote:
> I'm getting ready to do some diddling (ahem, that's "heuristic engineering" if
> you get paid for it) with direct (or zero-IF) conversion receivers. Before I
> get started, something is bugging me and I can't start experimenting on
> something that is doomed to failure from the getgo.
>
> Let's presume a regular old double-sideband full carrier VHF AM signal, crystal
> controlled. Let's presume the receiver also has a crystal controlled LO.
>
> Given the tolerance on crystals, say a really good 0.002% over temperature, that
> means that the transmitter could drift somewhere around 3 kHz on 2 meters and
> the LO could do the same. Perhaps they would zero beat each other, but the odds
> are not good. Mathematically, the odds are best for a heterodyne somewhere
> between 1 and 2 kHz., a loud audible tone.
>
> How do you get rid of the heterodyne, given that it will change over time,
> temperature, and tuning from one end of the band to the other?
>
> Jim
>
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

2170. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 22:44:29 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E78F2D2.450C4768@silverstar.com>
Source record: 36774

Can be used but some multiple supplies require that the +5V supply be
given a load before the others will work.

2171. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 22:57:49 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E78F5ED.95850851@bloomer.net>
Source record: 36775

Huh? Why use an LO at all? Use a germanium diode and "detect" the RF
directly, like the old crystal radio sets, then feed the low level audio
to an amp. Selectivity won't be great, but I don't think that's the
forte of DC receivers either!

Scott
N0EDV

Jim Weir wrote:
>
> I'm getting ready to do some diddling (ahem, that's "heuristic engineering" if
> you get paid for it) with direct (or zero-IF) conversion receivers. Before I
> get started, something is bugging me and I can't start experimenting on
> something that is doomed to failure from the getgo.
>
> Let's presume a regular old double-sideband full carrier VHF AM signal, crystal
> controlled. Let's presume the receiver also has a crystal controlled LO.
>
> Given the tolerance on crystals, say a really good 0.002% over temperature, that
> means that the transmitter could drift somewhere around 3 kHz on 2 meters and
> the LO could do the same. Perhaps they would zero beat each other, but the odds
> are not good. Mathematically, the odds are best for a heterodyne somewhere
> between 1 and 2 kHz., a loud audible tone.
>
> How do you get rid of the heterodyne, given that it will change over time,
> temperature, and tuning from one end of the band to the other?
>
> Jim
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

2172. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-19 23:47:56 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7901AC.2000301@bellsouth.net>
Source record: 36776

Jim Weir wrote:
> I'm getting ready to do some diddling (ahem, that's "heuristic engineering" if
> you get paid for it) with direct (or zero-IF) conversion receivers. Before I
> get started, something is bugging me and I can't start experimenting on
> something that is doomed to failure from the getgo.
>
> Let's presume a regular old double-sideband full carrier VHF AM signal, crystal
> controlled. Let's presume the receiver also has a crystal controlled LO.
>
> Given the tolerance on crystals, say a really good 0.002% over temperature, that
> means that the transmitter could drift somewhere around 3 kHz on 2 meters and
> the LO could do the same. Perhaps they would zero beat each other, but the odds
> are not good. Mathematically, the odds are best for a heterodyne somewhere
> between 1 and 2 kHz., a loud audible tone.
>
> How do you get rid of the heterodyne, given that it will change over time,
> temperature, and tuning from one end of the band to the other?
>
> Jim
>
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

There was a circuit in QST some time ago on a synchronous detector.
This is an AM detector designed to work on a reduced carier AM signal
(which some of the sw broadcasters thought of using). It uses a local bfo
phase locked to the (reduced) carier.

2173. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 00:07:01 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E790625.894A50D1@osite.com.br>
Source record: 36777

tk wrote:
>
> Look here..... http://www.antennex.com/preview/archive3/powers.htm
>
The Antennex article says that if one wants to get more
current, it has to parallell (sp?) some supplies, protecting
them with diodes.

Does anyone has any ideas on how to do this?
I am clueless about electronics, but willing to learn.

The australian way, posted below in the thread seems an
interesting way to follow.
But, if I wanted a 40A capable power supply, I would have to
place two of these in parallell.
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2174. Re: practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 02:41:54 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <ST9ea.8577$se1.5197571@newssvr28.news.prodigy.com>
Source record: 36778

"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in message
news:slrnb7hg63.r2p.gsm@cable.mendelson.com...
> In article <3e77b30a_2@corp-news.newsgroups.com>, John Bartley wrote:
> >
> > I'm about to try building an code prectise oscillator. The front end
> > (simplified) of my design is here:
> > http://www.ott.igs.net/~jcb/misc/osc/Osc.tif The idea is to have a
> > choice of three tones so that it doesn't get too monotonous.
>
> That's not such a good idea. Most radios have a fixed cw offset of 700
> Hz. Learn a different one and you will transmit off frequency. If you
> have, or plan to buy or build a rig with a different or adjustable
> offset, then you should play around with the one that works best for you
> and learn with it. But be aware that the code test is at 700 Hz.

Well all four of my Kenwoods (all different models and vintages) have an
offset of 800 Hz.

Even ff your radio has a fixed offset, one can use the RIT control to listen
at a tone they prefer that is easiest for them to work with and yet still
transmit on the correct frequency.

Dee Flint, N8UZE

2175. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 04:28:09 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b5bg0pmao1@freenet9.carleton.ca>
Source record: 36779

Scott (acepilot@bloomer.net) writes:
> Huh? Why use an LO at all? Use a germanium diode and "detect" the RF
> directly, like the old crystal radio sets, then feed the low level audio
> to an amp. Selectivity won't be great, but I don't think that's the
> forte of DC receivers either!
>
> Scott
> N0EDV
>
Actually, no.

In a direct conversion receiver, whatever is in the audio chain
determines the selectivity.

The mixer is just translating everything it sees down to DC and up.
So if the oscillator is tuned to 10MHz, a 10MHz signal at the input
of the mixer translates down to 0Hz (ie zero-beat) a 10.001MHz
signal translates down to 1KHz, and a 10.020MHz signal translates
down to 20KHz, almost above hearing range. Since the audio
stages after the mixer are likely/hopefully limited to the audio
range, it slices off the signals that translate to higher than audio
frequencies. And hopefully there is an audio filter of some sort
between the mixer and audio chain, that will limit the signals
that come out of the audio amplifier. If you have a low pass filter
that cuts off at 5KHz, you won't hear any signals that are higher
in frequency from the local oscillator. Also, except if two
stations are on the same frequency, they will translate to different
audio frequencies, so you can discriminate that way.

Note that no selectivity is needed before the mixer. Of course,
in most practical designs there is some sort of filtering there,
not for ultimate selectivity but to protect the mixer, which
will be less than ideal.

The case of some sort of filter followed by a diode detector is different.
If you don't have a good filter ahead of that detector, it will not
be able to differentiate between one station and the next. Each separate
station within the passband of the front-end filter will be converted
to audio, and there is nothing for you to differentiate between a
station at 1020KHz and a station at 1030KHz. Any audio filtering after the
detector will merely limit frequency response, not limit the passband of
the receiver.

The problem with a direct conversion receiver, as describe so far,
is that it can't tell the difference between a signal below zero-beat
and one above it. A signal at 9.999MHz and a signal at 10.001MHz will

both translate down to 1KHz. For that, you do need selectivity before
the mixer. Or, as usually the case in DC receivers where they don't want
this problem, two mixers and phasing networks are used, to select which
of the two images is desired.

Micahel VE2BVW

>
> Jim Weir wrote:
>>
>> I'm getting ready to do some diddling (ahem, that's "heuristic engineering" if
>> you get paid for it) with direct (or zero-IF) conversion receivers. Before I
>> get started, something is bugging me and I can't start experimenting on
>> something that is doomed to failure from the getgo.
>>
>> Let's presume a regular old double-sideband full carrier VHF AM signal, crystal
>> controlled. Let's presume the receiver also has a crystal controlled LO.
>>
>> Given the tolerance on crystals, say a really good 0.002% over temperature, that
>> means that the transmitter could drift somewhere around 3 kHz on 2 meters and
>> the LO could do the same. Perhaps they would zero beat each other, but the odds
>> are not good. Mathematically, the odds are best for a heterodyne somewhere
>> between 1 and 2 kHz., a loud audible tone.
>>
>> How do you get rid of the heterodyne, given that it will change over time,
>> temperature, and tuning from one end of the band to the other?
>>
>> Jim
>>
>> Jim Weir, VP Eng. RST Eng. WX6RST
>> A&P, CFI, and other good alphabet soup
>
> --
>
> Scott
> http://corbenflyer.tripod.com
> http://groups.yahoo.com/group/ParasolAirplanes
> Building RV-4
> Gotta Fly or Gonna Die!

2176. Bird LPF spec

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 04:42:38 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1048135357.625168@auth2.dns.griffin.net.uk>
Source record: 36780

I have a bird LPF model 5329 does anyone have spec on this?? I need to know max continious power rating..

thanks G0ZEN simon

2177. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 04:57:15 UTC
From: crabtreejr@aol.com
Message-ID: <20030319235715.29469.00000092@mb-ma.aol.com>
Source record: 36782

Michael Black, et472@FreeNet.Carleton.CA, on: 3/12/03 wrote:

>Dan Stanger (dan.stanger@ieee.org) writes:
>> Does anyone have a copy of the paper by Don Norgaard, titled
>> A Third Method of Generation and Detection of Single-Sideband Signals,
>> published in the Procedings of the IRE, Dec. 1956?
>> It describes how to generate ssb with 4 balanced modulators,
>> but without phase shift networks and filters.
>> Thank you,
>> Dan Stanger
>>
>I didn't know that he'd written such an article. The scheme
>is also known as the Weaver method.
>
>It does use phase shift networks, just not in the signal path.
>Split the audio into two mixers. The mixers are fed with
>an audio signal (commonly 1800Hz), but the feed to each mixer
>is 90 degrees apart. The output of those mixers are fed
>to two more mixers; again, their oscillator feed is 90
>degrees apart. This second oscillator would be at the
>IF frequency, or even the signal frequency. One way
>of looking at that first set of mixers, admittedly simplistic,
>is that it forms a broadband audio phase shift network. Of
>course, it's not so simple because of that carrier right in
>the middle of the audio passband.
>
>A limited bibliography on the subject is below. Admittedly limited
>to what I've come across, and I think Wireless World
>and perhaps QEX have had additional articles on the subject
>in recent years.
>
>QST Sept 1957. Howard F. Wright. "The Third Method of SSB".
>(This seems to be a popular version of the IRE article, complete
>with some excerpts. Note, it says the Dec. 1956 is by D.K. Weaver,
>which makes sense since it is called the Weaver method.)
>
>New Sideband Handbook. Published by CQ in 1958. Don Stoner.
>Two pages at the end of the phasing chaper cover the Third Method.
>A block diagram, and details on a commercial transceiver using
>the scheme.
>
>CQ Oct. 1962. An explanation, including a block diagram in
>the Sideband column on page 56.
>

>CQ June 1965. Fred Johnson. "The Third Method -- Is it Worthwhile?"
>(A more extensive explanation, with the diagram from the IRE
>article, it was also in the QST article, that lacks component values.)
>
>The Radio & Electronic Engineer. March 1973.
>I've never seen this article, don't even know the magazine, but
>apparently there is something about the Third Method, maybe as
>a receiver, maybe with AC coupling between the first set of
>mixers and the second set.
>
>The fifth edition, 1977, of the RSGB Radio Communication Handbook has
>some mention of the scheme. In the receiver section, briefly, and
>HF Transmitter chapter. No construction material.
>
>Ham Radio Jan 1978 VK2ZTB "Ssb phasing techniques" This is a review
>of various schemes, and memory tells me there is a bit about the
>Third method right at the end.
>
>Electronics World + Wireless World April 1993. Nic Hamilton. "SSB: third
>method, fourth explanatiion" (An explanation, and a full circuit
>in solid state taking advantage of digital circuitry.)
>
>QEX August 1991. Peter Anderson. "A Different Weave of SSB Exciter"
>I'd say more of a construction article than explanation, though
>it has that, and again making use of digital circuitry.
>
>I guess I should clarify that bit about digital circuitry. No digital
>processing is done in either of these articles; the digital is
>in the quadrature oscillators, and using CMOS switches for the
>mixers. But, I gather some have used the Third Method with
>a DSP, and there might perhaps be an article about it.
>
>William Sabin's book about SSB may have something about the
>scheme; at least, the Wireless World article references something
>in it.
>
>These are the references I have handy. I really get the feeling
>I've seen some passing references in magazine articles about direct
>conversion receivers.
>
>Doing a websearch is going to turn up some material.
>
>
> Michael VE2BVW

The Radio and Electronic Engineer was the Journal of the Institution of Radio and Electronic Engineers in the UK. It merged with the Institution of Electrical Engineers in ca. 1989.

The paper referred to from March 1973 was:

1. S.R. Al-Araji & Prof. W. Gosling, 'Direct conversion s.s.b. receivers', Radio and Electronic Engineer, Vol. 43, No. 3, pp 209-215, March 1973

This paper references a second one by the same authors which was published four months later.

2. S.R. Al-Araji & Prof. W. Gosling, 'A direct conversion v.h.f receiver', Radio and Electronic Engineer, Vol. 43, No. 7, pp 442-446, July 1973

In the first paper, they discuss the 'Weaver' method as follows:
"... This receiver is essentially equivalent to a class of band-pass filter proposed by Barber [4], and the circuit was first suggested for s.s.b. generation by Hall [5]. Weaver [6] drew attention to its possible use as a receiver, and for this reason it is known as Weaver's 'third method' of s.s.b. reception."

In the July 1973 paper (which was possibly written first) the design is refereed to as the Barber receiver.

[4] Barber, N.F., 'A narrow band-pass filter using modulation', Wireless Engineer, Vol 24, pp 132-134, March 1947

[5] Hall J.R., 'A phase rotation single sideband generating system', RCA Review, Vol 16, pp 43-51, March 1955

[6] Weaver, D.K. Jr., 'A third method of generation and detection of single sideband signals', Proc I.R.E. Vol 44, pp 1703-1705, Dec 1956

Some comments:
i) The idea of the filter described by Barber was to mix the signal to be filtered to baseband, filter it and then mix it back to the original frequency. It has a two channel band pass filter. In the first channel the input is multiplied by sin (wt) put through a low pass filter, and then multiplied by cos (wt). In the second channel the input signal is multiplied by cos (wt) put through a low paas filter, and then multiplied by - sin (wt). The output from the filter is the sum of the two channels.

ii) I have looked at the 1955 paper by Hall and do not understand how it fits with the Barber / Weaver configuration. The circuit uses four modulators, but appears to require a wideband audio phase-shift network.

There is also the 'fourth' method of SSB generation and detection, using polyphase networks. You can find an extensive bibliography, and copies of papers at Mike Gingell's (now KN4BS, I think) web page at http://users.vnet.net/gingell/polyphas/polyphas.html

HTH and 73

John KC0GGH

2178. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 04:58:06 UTC
From: averyfineman@aol.com
Message-ID: <20030319235806.04274.00001044@mb-co.aol.com>
Source record: 36781

In article <b5bg0pmao1@freenet9.carleton.ca>, et472@FreeNet.Carleton.CA
(Michael Black) writes:

>Note that no selectivity is needed before the mixer. Of course,
>in most practical designs there is some sort of filtering there,
>not for ultimate selectivity but to protect the mixer, which
>will be less than ideal.

Quite true, but the CMOS switch type mixer at the heart
of the Tayloe Detector (/Mixer) seems to be the best for
the lowest intermodulation products.

On the minus side for the Tayloe fans is there must be much
more attention paid to sub-microvolt audio range noise at
that mixer's output and the first of the audio amplifier stages.

>The case of some sort of filter followed by a diode detector is different.
>If you don't have a good filter ahead of that detector, it will not
>be able to differentiate between one station and the next. Each separate
>station within the passband of the front-end filter will be converted
>to audio, and there is nothing for you to differentiate between a
>station at 1020KHz and a station at 1030KHz. Any audio filtering after the
>detector will merely limit frequency response, not limit the passband of
>the receiver.
>
>The problem with a direct conversion receiver, as describe so far,
>is that it can't tell the difference between a signal below zero-beat
>and one above it. A signal at 9.999MHz and a signal at 10.001MHz will
>both translate down to 1KHz. For that, you do need selectivity before
>the mixer. Or, as usually the case in DC receivers where they don't want
>this problem, two mixers and phasing networks are used, to select which
>of the two images is desired.

The four SPST CMOS switches in the one package for a Tayloe
input stage will interface directly to the Gingell polyphase
network and, presto, an AM SSB receiver. No problem on
selecting upper or lower sideband...switching is done at audio
at the output of the polyphase network. One "mixer"...but needing
4 times the LO frequency required to get the four quadrature-phase
RF LO signals.

Hans Summers did good on his ham rig using the Tayloe and
a Gingell polyphase network, network values modified later in
an article available for downloading on his website.

Len Anderson
retired (from regular hours) electronic engineer person

2179. Re: Crystal specifications for oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 05:21:33 UTC
From: Carl Clawson <carlclawson@earthlink.net>
Message-ID: <xdcea.9776$jA2.917242@newsread2.prod.itd.earthlink.net>
Source record: 36783

Thanks, Wes, you are right.

When I read that Microchip note it seemed to make sense, but I must have made a mistake mentally adding up the phase shifts. For me, there's no substitute for sitting down with pencil and paper and grinding out the details. When I do that it works out that you need the crystal to be inductive -- and that's what a parallel resonant crystal looks like.

73, Carl WS7L

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:kk8e7vs178c4am1quu3366qdh5gpck4dp8@4ax.com...
> On Tue, 18 Mar 2003 05:51:18 GMT, "Carl Clawson"
> <carlclawson@earthlink.net> wrote:
>
> |Correcting all that, I come up with roughly 50 pF for the BE capacitance.
> |With the 100 pF of C2 in series, you're close to 30 pF. (It will be
> |device-dependent due to fT variations.) Then there's a catch: the crystal
in
> |the Pierce oscillator is series resonant,
>
> Not by my definition. That may be what Microchip states in places in
> the reference you cite below but their own figure 6 (and verbage in
> "Specifying a Crystal") proves otherwise. The crystal is operated
> above series resonance and below anti-resonance and is for all intents
> an inductor. He's a test. If you can't replace the crystal with a
> resistor equal to ESR and have the circuit still oscillate, it's *not*
> series resonant.
>

2180. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 05:31:30 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Smcea.15053$ja4.1019229@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36784
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I think I know what you mean; I had been using it with a Spectrum Analyzer,
to characterize filters. It sounds like it would need extra amplification
in order to meet the needs of a bridge.

Pete

Richard Clark <kb7qhc@attbi.com> wrote in message
news:i5oh7vk4a8q0dapke7m3cnuf36occ6jg06@4ax.com...
> On Wed, 19 Mar 2003 19:39:53 GMT, "Pete KE9OA"
> <n.gianakopoulos@worldnet.att.net> wrote:
>
> >I have a 0dBm nouse source design up on my website, flat from 100kHz to
> >1.3GHz. The URL is:
> >http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
> >
> >Pete
> >
>
> Hi Pete,
>
> Useful, I am sure, but with only 1mW across 1.3GHz, this works out to
> roughly -60dBm for any frequency that is received with a 10kHz BW.
> This is being quite generous, but for the purposes of driving a good
> bridge, this excitation (albeit well over S9) is just not enough.
>
> 73's
> Richard Clark, KB7QHC

2181. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 05:48:05 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e78753e$0$30591@echo-01.iinet.net.au>
Source record: 36759

Jan
In answer to some your points

Jan Wagner <jwagner@kosh.hut.fi> wrote in message
news:Pine.OSF.4.50.0303181826400.242020-100000@kosh.hut.fi...
>
> On Mon, 17 Mar 2003, Richard Hosking wrote:
> > We have done some work on the Tayloe mixer - it appears to act as quite
a
> > good filter at carrier frequency.
>
> Thanks!
> It's a good filter on the audio freq side, but I'd need the quadrature
> outputs. And input RF amplification, to use my existing dual AD831 I/Q
> mixer board (dead-weak reception with no preamp).
>
> My "idea" is:
>
> RF ___
> / \
> ------/ \-------------------
> ^
> | filter f_c == LO I or Q
> | bandwidth = 200 kHz, maybe
> |
> +-> rf preamp --> 2 x AD831 mixer --> I & Q AF
> ^
> |
> LO I and Q
>
> About the Tayloe mixer:
>
> > You can mix the signal back up to the
> > carrier or an IF frequency with a second mixer in reverse. I am not sure
how
> > it goes at harmonics - presumably it will have a spurious response as
the LO
> > drive is 4 digital signals.
>
> Probably lot's of digital clock feedthrough - switch gate capacitances -
> into the output. But these seem to be below -30dB
> (http://www.hut.fi/~jwagner/dc-rx/N-path-SC_bandpass.pdf)
>

Yes there is clock feedthrough
In the first mixer this is irrelevant is the output is audio.
The second is at 455 KHz output (4 paths in - 1 out) There will be clock feedthrough here but the signal is product detected in the third stage back down to audio using the same clock and the feed through ends up as DC.
The signal is translated from signal to audio to IF and you can filter it there. There is an SSB image down about 40 dB on the prototype The image is the inverse of the wanted signal ie - USB -> LSB and vice versa
In practice the receiver seems sensirtive and birdies dont seem to be a problem.

> Maybe it works. OTOH, odd, two mixers for down and then up conversion, and
> _then_ a RF preamp, and after that, quadrature mixer.
> Highly unconventional... ;-) Well, if I can't invent anything ingenious
> of my own, that'll have to do. Though I've some doubts about the
> performance of such a setup.
>
>
> But the Tayloe mixer (or N-path filter) gave an idea - modify it into a
> band reject filter, so all out-of receiving band signals are terminated
> on the output side of the mixer. And amplify the remaining in-band signal
> from the input side of the mixer. I'll give that one a try.
>

This should work except that the feedthrough will give you a carrier at LO freq. The impedance of the mixer seems to fall off rapidly either side of the LO freq. If you used the same LO for a direct conversion scheme I guess this wouldnt matter

>
> > I am designing just such a receiver at present
> > Rod Green (VK6KRG) has tried this concept on 7 MHz with a Tayloe mixer
> > frontend and an IF at 455 KHz. You get SSB rejection of about 40 dB
without
> > any special balancing of the 4 signal paths. The beauty of this setup is
> > that there are no phase shift networks in the audio path. He claims MDS
for
> > 20dB SINAD was -110dBm and mixer 1 dB compression was about 0 dBm.
(FST3125
> > mixer with no RF amp) It has good adjacent signal performance due to the
> > inherent attenuation of off channel signals - in short the ideal
reciever
> > topology!
>
> Sounds very good. 8-)
>

I had the theory *slightly* wrong here. The circuit effectively translates the wanted signal spectrum to IF via audio.
You then product detect the audio after appropriate filtering etc. The beauty is you can use an IF filter without IF image issues.

> It didn't use the 455kHz IF for a second upconversion, though? ;)
>
> Ok - any thoughts on how to use the AD9854 for this? Are four ultrafast
> analog comparators sufficient? (square up the I, Q, inverted I and Q?)
> If yes - have you used fast comps in your setup? NE521, other?
>
The AD9854 does not seem to have any immediate application unless you want
to use a single output at 4X LO and divide it down in a Johnson Ring counter
to get 4 phases

Richard

> many thanks!!
>
> - Jan
>
> --
> **********
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR
>

2182. Re: Direct Conversion RX question(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 08:54:39 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b5bvkf$27dq95$1@ID-61331.news.dfncis.de>
Source record: 36785

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20030319235806.04274.00001044@mb-co.aol.com...
> In article <b5bg0pmao1@freenet9.carleton.ca>, et472@FreeNet.Carleton.CA
> (Michael Black) writes:
>
>
> Hans Summers did good on his ham rig using the Tayloe and
> a Gingell polyphase network, network values modified later in
> an article available for downloading on his website.

Thankyou Len: http://www.hanssummers.com/radio/polyphase/index.htm

>
> Len Anderson
> retired (from regular hours) electronic engineer person
>

2183. FDK Multi 2000 VHF multimode FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 11:04:25 UTC
From: G4BXD@qsl.net
Message-ID: <3e799f56.622507@news.compuserve.com>
Source record: 36786

FDK Multi 2000 VHF multimode FS

with mic and mains lead, working, good condx. £40

Ben.

2184. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 11:42:59 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.0303201315050.138377-100000@kosh.hut.fi>
Source record: 36787

Hi,

and thanks for the clarifications! I'll be off to reading & building.

Just a quick last comment:

> > Ok - any thoughts on how to use the AD9854 for this? Are four ultrafast
> > analog comparators sufficient? (square up the I, Q, inverted I and Q?)
> > If yes - have you used fast comps in your setup? NE521, other?
> >
> The AD9854 does not seem to have any immediate application unless you want
> to use a single output at 4X LO and divide it down in a Johnson Ring counter
> to get 4 phases

Actually, if you draw the DDS I & Q output signals on paper, then you'll
notice it counts "10 11 01 00 ..." - a 2-bit Gray code counter.

So there's no need for 4 x LO or 2 x XOR pulse doublers, and no extra
counter chip required either. Yes, the multiplexer outputs won't be
conveniently ordered in a linear 0-90-180-240deg fashion, but just
swap two wires on the output and it's all sorted out. :)

cheers,

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2185. HELP NEEDED REMOTE TUNER & SWITCH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 12:13:13 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <tfiea.29212$qL4.594976@twister.rdc-kc.rr.com>
Source record: 36788

Hi,
I hope to use the expertise of this group to assist me with some antenna design/work.

Last fall I built a flag pole vertical it is appx 34 feet high, and made of two 20' aluminum flag pole kits from Sams Club. I used appx 5000' of wire to form the radial ground system, and I feed it through a AH4 automatic antenna tuner located at the base of the antenna. (I can provide photos upon request) This easily loads the antenna on all bands 160-6 meters

The antenna has a natural resonance on 40M but needs the tuner for all other bands. The AH4 is only rated for 100W.

HELP NEEDED
I want to replace the AH4 with a matching network capable of handling full legal limit. Currently My plan is to construct a loading coil and tapping it for 160, 80, and 40. 30M and up will need some additional capacitance at the antenna begins to look more and more inductive as you climb in frequency.

What I need help with are design ideas for building a relay network capable of selecting 10 different feedpoints or taps, and perhaps some construction ideas on the loading coil and fixed capacitor choice.

I was going to consider a vacuum variable cap, but after seeing the price I have, reconsidered this and am probably going to look at using a cap from a antenna tuner and just setting it and locking it in place.

Please email me directly with your ideas or suggestions

KA4UPW@wi.rr.com

2186. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 13:20:22 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <CPqcnZwHtvpHXeSjXTWcpQ@comcast.com>
Source record: 36789

The best thing is to take the torroid and rewind it for the application you have in mind. The author of the SMPS article in QEX stated that Ai is around 900uH/100t for the torroids in computer supplies.

You can buy a good current controlled switch mode chip for a couple bucks, the FET's diodes and caps are only going to cost a few dollars more (thanks Clint).

Jack

. While you really should characterize the big torroid (by measuring L(uh) at 100 turns) you might be able
"Roger" <socool@sk.sympatico.ca> wrote in message news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

2187. Rohde SMS 27 Sig Gen?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 13:28:45 UTC
From: Greg <qrp73@talk21.com>
Message-ID: <3e79c16f$1_1@news.iprimus.com.au>
Source record: 36790

I am looking at buying a second hand Rohde & Schwartz SMS 27 signal generator. I was seeking opinions on the reliability and performance.

Thanks
Greg

2188. Re: SMPS Xfmr design equations

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 13:29:13 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <CJSdne2YZ_ZwX-SjXTWcpQ@comcast.com>
Source record: 36791

Thanks Jan

"Jan Wagner" <jwagner@cc.hut.fi> wrote in message
news:b4v731$42c$1@nyytiset.pp.htv.fi...
> Hi,
>
> "john walton" <jdwalton@comcast.net> schrieb im Newsbeitrag
> news:NRSdnQs1wuKhSuyjXTWcpQ@comcast.com...
> > I took the design equations from the Linear Technology LT1683
> Push-Pull SMPS
> > driver and put them up in spreadsheet form at
> www.tech-diy.com/smps.htm
> >
> > Comments and suggestions are welcome. The recent article in QEX got
> me
> > going!
>
> Looks nice! :)
>
> Some points:
>
> - "N" is the (2 x pri):(1 x sec) turns ratio of the center tapped push
> pull transformer, i.e., not the number of turns.
>
> - The primary and secondary inductance may be calculated after you have
> already chosen a xfmr core, and know t.ex. the A_L value for that core.
> There are formulas
> (http://www.hut.fi/~jwagner/tesla/SSTC/general-sstc-notes-recreading.htm
> or http://www.hut.fi/~jwagner/tesla/SSTC/SSTC-Designer.xls (my latter
> excel sheet is a bit flawed at some points, tho)) for calculating the
> minimum number of pri turns which prevent saturating the core. From
> these values you can the continue and estimate the pri & sec
> inductances.
>
> - the ESR numbers for the caps - an ESR of 5 ohms sounds a bit drastic,
> doesn't it? ;-) Something like 0,005 Ohm or less is more realistic. As
> a bonus, the values for C(in) and C(out) capacitances will be positive
> then. :-)
>
> Have fun!
>
> And btw, don't concentrate too much maths! :o) (it's all just for
> reference, and when you build the circuit, you probably will end up
> having to make some extra changes to the pre calculated values in any

> case, so there's no reason to loose all hope waist-deep in all that
> maths... ;-)
>
> cheers,
>
> - Jan
>
>
>
>
>

2189. TO220 resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 14:44:47 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <5GG9gMHfPde+EwHx@fslife.co.uk>
Source record: 36792

Does anyone here in the UK have a minimum of 8 surplus to requirements
TO220 package, 20w minimum 0.5ohm resistors?

Farnel have them but at a heart rendering price.

Far less costly from distributors but I only require a small quantity.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2190. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 16:59:23 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.0303201821080.217940-100000@kosh.hut.fi>
Source record: 36794

On Thu, 20 Mar 2003, Richard Hosking wrote:
>> Actually, if you draw the DDS I & Q output signals on paper, then
>> you'll notice it counts "10 11 01 00 ..." - a 2-bit Gray code counter.
>
> OK but note that the duty cycle of the Tayloe LO signals is 25% rather than
> 50% - you will have to square up the two outputs and sum them in a quad NAND
> gate . But sure - good idea.

It's well possible I'm missing a major point here, but...

I: 1 1 0 0 (sin)
Q: 1 0 0 1 (cos)

This full 11, 10, 00, 01 count sequence is gone through in a _single_ LO cycle => multiplexer lines are changed at 4 x DDS LO. Like in the Johnson counter setup clocked at 4 x target freq.

No repetitions inside the "11,10,00,01" sequence => each of the four mux outputs will have a duty cycle of 25%, and their frequency is equal to the LO/DDS frequency. That's what is required for the Tayloe detector. I'd think. Probably. ;o)

The AD9854 has one fast comparator on board, so squaring up the other of the I or Q channels requires just one external fast comparator like a 900MHz SPT9689. And then the square wave outputs go directly to the FST3253 mux.

Flames/comments? ;-)

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2191. Re: practise code osc question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 17:52:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303200952.75e59bf3@posting.google.com>
Source record: 36795

John Bartley <jcb@igs.net> wrote in message news:<3e77b30a_2@corp-news.newsgroups.com>...
> Hi all
>
> I'm about to try building an code prectise oscillator. The front end
> (simplified) of my design is here:
> http://www.ott.igs.net/~jcb/misc/osc/Osc.tif The idea is to have a
> choice of three tones so that it doesn't get too monotonous. My question
> is; I understand the concept of the voltage divider in a colpitts osc,
> but can't find any books which discuss the impact of a much larger cap
> across the inductor and how that affects the value of the voltage
> divider caps. My thinking is that the tank circuit, which is composed of
> the two trimmers making the voltage divider parallelled (sp?) with the
> switched in/out caps tanked with the inductor, will form a tank circuit
> unto themselves and the trimmers will work as dividers regardless
> because they are the only caps between grid/plate and grid/cathode
> So how wrong am I?

Yes, there are some problems with that circuit. Have a look at some
other Colpitts oscillator circuits for more ideas. Two things I
immediately notice: as you say, you need some DC path to the grid,
and also, given an implicit B+ bypass, the bypass will short out the
tank with key down.

There are lots of RC oscillator circuits you could use that wouldn't
require the huge inductor, too. If you want to stay with a sinewave,
you could use a Wien bridge oscillator, an R-C phase shift oscillator,
a state-variable oscillator, or a function-generator with sawtooth to
sine converter. If you want something very simple, you can make a
blocking oscillator with very few parts; see for example the
oscillator part of http://www.techlib.com/electronics/rbeeper.htm.
The osc is just Q4, R7, C1, R6, T1, the speaker, and the battery. Put
a resistor (try about 22k-220k ohms...use it to adjust the pitch) in
series with a key between the R7-C1 junction and the negative battery
lead to key it. Or...search through the same (techlib) site for some
other audio oscillators. All these _can_ be done with tubes if you
wish. BTW, another issue is how fast the oscillator starts up when
you key it...the blocking oscillator is essentially instantaneous, but
most sinewave oscillators won't be.

Cheers,
Tom

2192. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 18:07:45 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0303201007.44eca4ba@posting.google.com>
Source record: 36796

crabtreejr@aol.com (John Crabtree) wrote in message
news:<20030319235715.29469.00000092@mb-ma.aol.com>...

> (grossly excessive quoting snip snip snipped...)
>
> There is also the 'fourth' method of SSB generation and detection, using
> polyphase networks. You can find an extensive bibliography, and copies of
> papers at Mike Gingell's (now KN4BS, I think) web page at
> http://users.vnet.net/gingell/polyphas/polyphas.html
> (...)

While the Gingell polyphase networks are an effective
way to generate a broadband audio phase shift, they do
not constitute a fourth method - they are an alternative
for the audio phase shift part of a phasing exciter or
receiver, right along with all-pass filters (e.g. KK7B),
passive networks (e.g. B&W 2Q4) and DSP.

I note that the articles cited in this thread are almost
all old enough to vote. The articles remain interesting
and the theoretical content remains sound, but many of
the issues of the time, like component tolerance and
stability, are non-issues now.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2193. Re: how to build a localized radar

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 18:28:40 UTC
From: tim conway <n9hmg@mailhot.reversethatanddropthis.com>
Message-ID: <pan.2003.03.20.18.28.48.958207@mailhot.reversethatanddropthis.com>
Source record: 36697

Since you control the detected device, I would suggest the easy way out. Rather than looking for it, trying to see it despite possible intervening obstacles, etc., and the other problems with echolocation, have the thing you're looking for frequently tell you exactly where it is. AX.25 packets containing GPS data - APRS. The software already exists in many forms. One company is making a combo GPS/TNC - just add a transmitter. I'm expecting somebody soon to combine a GPS, APRS-transmit-only TNC, and 150mw 2m transmitter on the APRS frequency. It should be possible to fit that into a 2"x1"x1" 5oz stick, with a patch antenna and a stubby duck, for about USD20/unit. However, I don't know that the demand is there go support the development cost of the ASICS, so your easiest route is probably one of those APRS-enabled handhelds with a cheap GPS unit.

On the tracking side, you'll just need a receiver and a tnc or sound card, and APRS software (free, all over the internet).
Depending on antenna heights, this could work well beyond your 440yd radius. Even just rubber ducks 5 feet off the ground should get you a mile or so in any conditions, and if your fixed station can put a vertical up 30 feet, you should be solid out to 15 miles or more.

I welcome the inevitable technical corrections on range. I don't remember the formulae, so I went very conservative, based on personal experience.

Tim Conway

On Mon, 10 Feb 2003 17:40:38 +0000, x wrote:

> Im trying to build a radar system that will detect another device (also
> to be built by me) within a 1/4 mile radius. I really need some of the
> smart people's advice and direction as to how to accomplish this.
>
> the device will not be in the air or under water, it will be like a
> person on land. The radar detector should be able to locate that
> "person" (to some degree) (I am a software engineer and can interpret
> the signals if presented properly)...
>
> Thank you so much for your help!
>
> ps. the email is fake, but I will check online messages.

2194. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 18:37:50 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b5d1pu$5na$1@freenet9.carleton.ca>
Source record: 36698

Laura Halliday (marsgal42@hotmail.com) writes:
>
> I note that the articles cited in this thread are almost
> all old enough to vote. The articles remain interesting
> and the theoretical content remains sound, but many of
> the issues of the time, like component tolerance and
> stability, are non-issues now.
>
Well, there have been some recent articles mentioned, and
they have been of the practical nature, which suggest to me
that the third method become more a practical method with
recent advances.

It's easy to list a bibliography because relatively little
has been printed on the subject. One can find oodles of
articles on phasing and filter generation of sideband, and
while a few key articles might stand out, generally there's
no problem finding such information. The third method has
always been relatively obscure.

And as I've said, sometimes the earliest articles are more
informative, for the basics, because it is a new field.
Going back to the original articles on the third method
might be more useful than a 1977 article (I just remembered
73 had an article in '77 or 78 on the topic) which is merely
a rehash of previous material, and may have a tone of dismissal
that the original does not have. If people don't grasp the
basics, then they will have a hard time implementing it with
the new advances that likely do make it easier now than forty
years ago.

Michael VE2BVW

2195. FA:EBAY:MANUALS+SIMPSON VTVM +

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 20:57:07 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <DWpea.19580$S%3.1106263@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36699

On ebay under heytubeguy seller:
Manuals: Heath, Drake Hallicrafters, Military,Collins Nav, Surplus
Conversion
RF switch
Tentec 1.5kw dummy load
B&W plate choke
1954 Allied Cat Hardbound edition
Simpson vtvm
check daily for other items.....
heytubeguy

2196. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 21:53:23 UTC
From: wastebin <spam@hobbit.demon.co.uk>
Message-ID: <HibjRp0Thje+Ewif@hobbit.demon.co.uk>
Source record: 36700

In message <Pine.OSF.4.50.0303201821080.217940-100000@kosh.hut.fi>, Jan Wagner <jwagner@kosh.hut.fi> writes
>This full 11, 10, 00, 01 count sequence is gone through in a _single_
>LO cycle => multiplexer lines are changed at 4 x DDS LO. Like in the
>Johnson counter setup clocked at 4 x target freq.
>
>No repetitions inside the "11,10,00,01" sequence => each of the four
>mux outputs will have a duty cycle of 25%, and their frequency is equal
>to the LO/DDS frequency. That's what is required for the Tayloe
>detector. I'd think. Probably. ;o)
>
>The AD9854 has one fast comparator on board, so squaring up the other
>of the I or Q channels requires just one external fast comparator like
>a 900MHz SPT9689. And then the square wave outputs go directly to the
>FST3253 mux.
>
>Flames/comments? ;-)

Well I think you're right Jan. It's the demux internal to the FST3253 that gives the 25% duty cycle.
As far as I can see the Tayloe mixer is simply a neat implementation of two SPDT mixers switched in quadrature.

Can anyone see any reason why the Tayloe mixer would be better than two simple SPDT mixers? It seems to me that as the filter capacitors see the signal for twice as long in the classic mixer and would give similar, if not better, results.
I've built both and I can't hear any difference.

--
Martin G0PFT

2197. Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 22:10:28 UTC
From: Tracy Fort <tracy.fort@gimail.af.mil>
Message-ID: <l6fk7v87benf6o1gegvomnq4o5bctv4n6n@4ax.com>
Source record: 36701

What is the easiest way to determine the value of a variable cap? I have found a 2 gand cap that might work well for a regenerative receiver that I'm building but need to determine it's value...

thanks,
Tracy
Tracy Fort

KE4ODD

tracy.fort@gimail.af<NOSPAM>.mil

remove <NOSPAM> for repliess

2198. Re: SSB paper

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 22:42:35 UTC
From: averyfineman@aol.com
Message-ID: <20030320174235.20752.00000356@mb-ff.aol.com>
Source record: 36702

In article <20030319235715.29469.00000092@mb-ma.aol.com>, crabtreejr@aol.com (John Crabtree) writes:

>[5] Hall J.R., 'A phase rotation single sideband generating system', RCA
>Review, Vol 16, pp 43-51, March 1955

For what it's worth, James R. Hall is KD6JG. He was my immediate manager at RCA Corporation EASD in Van Nuys, California. Now alive and netting regularly from a 5000 foot elevation in central California. :-)

>ii) I have looked at the 1955 paper by Hall and do not understand how it fits
>with the Barber / Weaver configuration. The circuit uses four modulators, but
>appears to require a wideband audio phase-shift network.

It was an audio-range-only method devised at a time when ALL filters and phase-shift networks were expensive and difficult to put together and test...actually about 1954. It took a bit of time before it appeared in the RCA Review.

Jim's reference in a footnote on page 41 of the "Single Sideband Principles and Circuits" by Pappenfus, Bruene, and Schoenike (McGraw-Hill 1964) is not quite correct.

>There is also the 'fourth' method of SSB generation and detection, using
>polyphase networks. You can find an extensive bibliography, and copies of
>papers at Mike Gingell's (now KN4BS, I think) web page at
> http://users.vnet.net/gingell/polyphas/polyphas.html

Heh...I've detected some comments on "nomenclature" of the method. Regardless of such disputes, the Gingell polyphase network represented a major innovation. What I would call a final refinement of the Gingell network appears in QEX, June 1995 issue by Tetsuo Yoshida, JA1KO. Yoshida came up with values which are much flatter in their relative phase shifts over a wider bandwidth. A practical version of that combination is on Hans Summers' website along with the JA1KO paper.

There were several papers of the 1970s-1980s in the IEEE Communications Society Transactions which took up analyses and some slight synthesis of polyphase networks. Those are really only of academic interest now since communications work shifted towards digital time-multiplexing rather than the old "carrier" frequency-multiplexer methods. All in all, the Gingell polyphase is an excellent, value-tolerant network which works for both modulation and demodulation...and it does re-appear from time to time, even in a couple of semiconductor

manufacturer's application notes! :-)

Len Anderson
retired (from regular hours) electronic engineer person

2199. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 23:27:54 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E7A4E7A.A99B1C46@cox.net>
Source record: 36703

The difference is that the two mixers each will have 4 to 6 db of loss each, plus an additional signal splitter loss in front of that, for perhaps 7 to 12 db of loss overall. The Tayloe mixer does it all in one shot and has only 1 db of total conversion loss, plus off signal rejection capabilities to boot.

- Dan, N7VE

wastebin wrote:
>
> In message <Pine.OSF.4.50.0303201821080.217940-100000@kosh.hut.fi>, Jan
> Wagner <jwagner@kosh.hut.fi> writes
> >This full 11, 10, 00, 01 count sequence is gone through in a _single_
> >LO cycle => multiplexer lines are changed at 4 x DDS LO. Like in the
> >Johnson counter setup clocked at 4 x target freq.
> >
> >No repetitions inside the "11,10,00,01" sequence => each of the four
> >mux outputs will have a duty cycle of 25%, and their frequency is equal
> >to the LO/DDS frequency. That's what is required for the Tayloe
> >detector. I'd think. Probably. ;o)
> >
> >The AD9854 has one fast comparator on board, so squaring up the other
> >of the I or Q channels requires just one external fast comparator like
> >a 900MHz SPT9689. And then the square wave outputs go directly to the
> >FST3253 mux.
> >
> >Flames/comments? ;-)
>
> Well I think you're right Jan. It's the demux internal to the FST3253
> that gives the 25% duty cycle.
> As far as I can see the Tayloe mixer is simply a neat implementation of
> two SPDT mixers switched in quadrature.
>
> Can anyone see any reason why the Tayloe mixer would be better than two
> simple SPDT mixers? It seems to me that as the filter capacitors see the
> signal for twice as long in the classic mixer and would give similar, if
> not better, results.
> I've built both and I can't hear any difference.
>
> --
> Martin G0PFT

2200. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 23:34:38 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E7A500E.51F452CC@cox.net>
Source record: 36704

I have phased locked a pair of AD9851s to do exactly what you are
talking about here. However, the Tayloe detector seems to be more
sensitive to LO noise than a balanced diode mixer, leading to poor
performance above 14 MHz.

Using a good clean LO, noise is not a problem. VXOs, Phased locked VCOs
or VFOs are a much better LO for this detector.

- Dan, N7VE

Jan Wagner wrote:
>
> On Thu, 20 Mar 2003, Richard Hosking wrote:
> >> Actually, if you draw the DDS I & Q output signals on paper, then
> >> you'll notice it counts "10 11 01 00 ..." - a 2-bit Gray code counter.
> > >
> > > OK but note that the duty cycle of the Tayloe LO signals is 25% rather than
> > > 50% - you will have to square up the two outputs and sum them in a quad NAND
> > > gate . But sure - good idea.
> >
> > It's well possible I'm missing a major point here, but...
> >
> > I: 1 1 0 0 (sin)
> > Q: 1 0 0 1 (cos)
> >
> > This full 11, 10, 00, 01 count sequence is gone through in a _single_ LO
> > cycle => multiplexer lines are changed at 4 x DDS LO. Like in the Johnson
> > counter setup clocked at 4 x target freq.
> >
> > No repetitions inside the "11,10,00,01" sequence => each of the four mux
> > outputs will have a duty cycle of 25%, and their frequency is equal to
> > the LO/DDS frequency. That's what is required for the Tayloe detector. I'd
> > think. Probably. ;o)
> >
> > The AD9854 has one fast comparator on board, so squaring up the other of
> > the I or Q channels requires just one external fast comparator like a
> > 900MHz SPT9689. And then the square wave outputs go directly to the
> > FST3253 mux.
> >
> > Flames/comments? ;-)
> >
> > - Jan
> >
> > --
> > **********

> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR

2201. WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 23:56:31 UTC
From: k9sqg@aol.com
Message-ID: <20030320185631.24060.00000134@mb-fa.aol.com>
Source record: 36705

Since these aren't being made anymore, stocks are drying up. Have any new ones in your junkbox you'd like to sell?

73s,

Evan

2202. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-20 23:57:58 UTC
From: Jim N2VX <nospam@nospam.com>
Message-ID: <avkk7vo0mq3vpdgadp2ku40l1u38v9f5n5@4ax.com>
Source record: 36706

To connect in parallel for more current: Connect all
the "-" leads. Place a diode on each "+" output.
Connect the other end of each diode to a common point.
This isolates each of the individual supplies.

73,
Jim

On Wed, 19 Mar 2003 21:07:01 -0300, Paulo Marcondes
<pepm@osite.com.br> wrote:

>tk wrote:
>>
>> Look here..... http://www.antennex.com/preview/archive3/powers.htm
>>
>The Antennex article says that if one wants to get more
>current, it has to parallell (sp?) some supplies, protecting
>them with diodes.
>
>Does anyone has any ideas on how to do this?
>I am clueless about electronics, but willing to learn.
>
>The australian way, posted below in the thread seems an
>interesting way to follow.
>But, if I wanted a 40A capable power supply, I would have to
>place two of these in parallell.

2203. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 00:18:08 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <BKsea.56157$Dp.48326@fe01.atl2.webusenet.com>
Source record: 36707

Every edition of the ARRL handbook ever printed has the formulas for calculating capacitance, and I'm sure it would be on the web somewhere and in hundreds of other books

You will need to measure the area of one plate and the gap spacing between them. Go to the hardware store and buy a set of feeler gauges, the kind that is made of different thicknesses of metal, and use it to measure the spacing. From the formulas calculate the capacitance between two adjacent plates. With the thing completely meshed, count the number of gaps and multiply by the capacitance calculated to give you the total capacitance. This should get you 'close enough' to the maximum capacitance.

Don't forget to include a little bit for stray capacitances, which may be significant on higher frequencies.

Or you could get one of these nifty digital capacitance meters and measure it, which will give you the maximum, minumum, and inbetween values.

Jim
N8EE

"Tracy Fort" <tracy.fort@gimail.af.mil> wrote in message
news:l6fk7v87benf6o1gegvomnq4o5bctv4n6n@4ax.com...
> What is the easiest way to determine the value of a variable cap? I
> have found a 2 gand cap that might work well for a regenerative
> receiver that I'm building but need to determine it's value...
>
> thanks,
> Tracy
> Tracy Fort
>
> KE4ODD
>
> tracy.fort@gimail.af<NOSPAM>.mil
>
> remove <NOSPAM> for repliess

2204. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 00:20:13 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <zMsea.56158$Dp.8222@fe01.atl2.webusenet.com>
Source record: 36708

You could use it as amunition for a Trebuchet (do a web search if you don't know what it is).

Jim
N8EE

"Roger" <socool@sk.sympatico.ca> wrote in message news:3E77AFC7.315A36E4@sk.sympatico.ca...
> Can computer power supplies be used as power supplies for radios? Seems
> like a pity to just throw out all those good computer power supplies.
> Any ideas what else they might be used for?
>
>
>

2205. Re: Uses for computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 01:15:04 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E7A6798.544B73AE@osite.com.br>
Source record: 36709

Jim N2VX wrote:

> This isolates each of the individual supplies.

Now that makes perfect sense.
Thanks Jim
--
Paulo E.P. Marcondes
PU2PIX
pepm@osite.com.br

2206. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 02:28:23 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3E7A78C7.4030800@igs.net>
Source record: 36710

Tracy Fort wrote:
> What is the easiest way to determine the value of a variable cap? I
> have found a 2 gand cap that might work well for a regenerative
> receiver that I'm building but need to determine it's value...
>
> thanks,
> Tracy
> Tracy Fort
>

You can usually find A general Radio model 650 LCR bridge on ebay for
about 20-40$

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2207. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 02:53:58 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7A7EC6.6020305@bellsouth.net>
Source record: 36711

John Bartley wrote:
> Tracy Fort wrote:
>
>> What is the easiest way to determine the value of a variable cap? I
>> have found a 2 gand cap that might work well for a regenerative
>> receiver that I'm building but need to determine it's value...
>>
>> thanks,
>> Tracy
>> Tracy Fort
>>
>
> You can usually find A general Radio model 650 LCR bridge on ebay for
> about 20-40$
>
>

Hmmm, I paid a little more for my GR bridge (not the same model, I got
the one with the Omni-null two dial job).
But I think my Heathkit IB5281 is actually easier to use!

2208. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 02:54:47 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7A7EF7.9070308@bellsouth.net>
Source record: 36712

K9SQG wrote:
> Since these aren't being made anymore, stocks are drying up. Have any new ones
> in your junkbox you'd like to sell?
>
> 73s,
>
> Evan

I think ocean state electronics still has them.

2209. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 03:09:05 UTC
From: Richard <rlwest@nethere.com>
Message-ID: <3E7A8251.A3CA023F@nethere.com>
Source record: 36713

Put an inductor of a known value across it to make a parallel LC circuit
then use a dip meter to find its resonant frequency. Then plug in the
formula to find inductive reactance. Since inductive reactance equals
capacitive reactance at resonance, the rest is simple. Go to the formula
for capacitance and plug in the values of resonant frequency and
capacitive reactance.
Richard West KF6KE

Tracy Fort wrote:

> What is the easiest way to determine the value of a variable cap? I
> have found a 2 gand cap that might work well for a regenerative
> receiver that I'm building but need to determine it's value...
>
> thanks,
> Tracy
> Tracy Fort
>
> KE4ODD
>
> tracy.fort@gimail.af<NOSPAM>.mil
>
> remove <NOSPAM> for repliess

2210. Re: Variable cap value

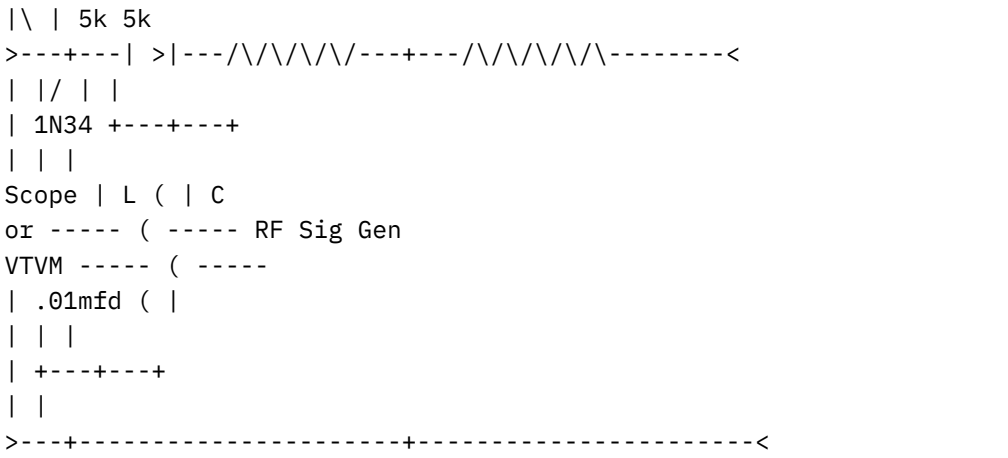
Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 04:00:58 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <871y115pxh.fld@barrow.com>
Source record: 36714

Richard <rlwest@nethere.com> wrote:
>Put an inductor of a known value across it to make a parallel LC circuit
>then use a dip meter to find its resonant frequency. Then plug in the
>formula to find inductive reactance. Since inductive reactance equals
>capacitive reactance at resonance, the rest is simple. Go to the formula
>for capacitance and plug in the values of resonant frequency and
>capacitive reactance.
>Richard West KF6KE

That can also be done with a signal generator and almost any kind of
high impedance RF detector (on a DVM, VTVM, or scope for example).

Wind a coil or grab something from the junk box. Put a known value
of fixed capacitor across it. Then put a sufficiently large (depends
on how sensitive the detector is and how much output the signal generator
has) resistance in series with the signal generator output and connect
that across the LC parallel circuit. The RF detector will peak at the
resonant frequency, and the value of the inductor can then be determined
using the known capacitor and charts. Then substitute the unknown
capacitor and repeat to determine the value of an unknown capacitor.

Here's a circuit:



The 5k values are guestimates, and may not work well if the RF signal
generator output is too low.

>Tracy Fort wrote:
>
>> What is the easiest way to determine the value of a variable cap? I
>> have found a 2 gand cap that might work well for a regenerative
>> receiver that I'm building but need to determine it's value...
>>

>> thanks,
>> Tracy
>> Tracy Fort
>>
>> KE4ODD
>>
>> tracy.fort@gimail.af<NOSPAM>.mil
>>
>> remove <NOSPAM> for repliess
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2211. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 05:27:42 UTC
From: "Mark J. Dulcey" <mark@buttery.org>
Message-ID: <pan.2003.03.21.05.27.41.638535@buttery.org>
Source record: 36715

On Sat, 15 Mar 2003 19:13:54 +0100, Ale55andro wrote:

> I'm really attracted from the very low price...
>
> http://smallwonderlabs.com/Rockmite.htm
>
> How it performs?

The Rock-Mite is a very limited function rig, because it's bound to just one frequency. (Well, actually two that are close together.) On the other hand, its receiver performance is considerably better than most simple direct conversion designs, because of the front-end selectivity added by the crystal. (One of the two crystals in the Rock-Mite is used as a simple filter; the other is used in the master oscillator.)

It's a toy, not a general purpose radio. But it's a good toy. If you enjoy the game of making contacts with simple equipment, it's a lot of fun. If you like your contacts to come easily, it's not the radio for you.

2212. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 07:28:26 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e79de43$0$32000@echo-01.iinet.net.au>
Source record: 36793

OK but note that the duty cycle of the Tayloe LO signals is 25% rather than 50% - you will have to square up the two outputs and sum them in a quad NAND gate . But sure - good idea.

Richard

Jan Wagner <jwagner@kosh.hut.fi> wrote in message news:Pine.OSF.4.50.0303201315050.138377-100000@kosh.hut.fi...
> Hi,
>
> and thanks for the clarifications! I'll be off to reading & building.
>
> Just a quick last comment:
>
> > > Ok - any thoughts on how to use the AD9854 for this? Are four ultrafast
> > > analog comparators sufficient? (square up the I, Q, inverted I and Q?)
> > > If yes - have you used fast comps in your setup? NE521, other?
> > >
> > The AD9854 does not seem to have any immediate application unless you want
> > to use a single output at 4X LO and divide it down in a Johnson Ring counter
> > to get 4 phases
>
> Actually, if you draw the DDS I & Q output signals on paper, then you'll
> notice it counts "10 11 01 00 ..." - a 2-bit Gray code counter.
>
> So there's no need for 4 x LO or 2 x XOR pulse doublers, and no extra
> counter chip required either. Yes, the multiplexer outputs won't be
> conveniently ordered in a linear 0-90-180-240deg fashion, but just
> swap two wires on the output and it's all sorted out. :)
>
> cheers,
>
> - Jan
>
> --
> **********
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR

2213. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 08:49:44 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0303210049.7e908b1d@posting.google.com>
Source record: 36717

Tracy Fort <tracy.fort@gimail.af.mil> wrote in message
news:<l6fk7v87benf6o1gegvomnq4o5bctv4n6n@4ax.com>...
> What is the easiest way to determine the value of a variable cap? I
> have found a 2 gand cap that might work well for a regenerative
> receiver that I'm building but need to determine it's value...
>
Well, I can think of a few ways, any of which *might* be the easiest,
depending on what you have at hand.

1) Use an LCR meter. Very nice to have around. Good for bringing to
swapmeets to ID mystery parts!

2) Add a known inductance to make a tuned circuit and check the freq.
with a dip meter, then work back to calculate C.

3) Add a known inductance to make a tuned circuit and build an
oscillator with it, then measure the freq. and calculate C.

4) Take an appropriate freq. source (e.g. 1 MHz) and feed it into a
capacitive divider, with a known capacitor in series with the
variable. Look at the midpoint amplitude with a scope. Substitute
the fixed capacitor until the midpoint amplitude is 1/2 the incoming
amplitude, then the variable value is equal to the fixed value (+/- a
little bit of scope loading).

5) Look at pictures of known variable capacitors in catalogs, old
Handbooks, or on ebay. You can usually get a pretty good idea of what
you have by looking for something similar.

6) Look on the back and see the value stamped there (hey, it
happens!).

73,
Mike, KK6GM

2214. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 11:51:19 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3E7AFCB7.7090000@igs.net>
Source record: 36718

scharkalvin wrote:
>
>
> Hmmm, I paid a little more for my GR bridge (not the same model, I got
> the one with the Omni-null two dial job).
> But I think my Heathkit IB5281 is actually easier to use!
>
>

Hi Ken,

You might have a 1650??? They're newer, portable, more compact, and can be carried by one person. The 650 doesn't read as low on inductance IIRC, and may or may not have the 120vac power built in. I think I paid $15.00 for mine on Ebay, got it home, and promptly euchered (sp?) the null meter with too much DC. Now I use a scope for the null.

cheers

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2215. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 11:55:13 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3E7AFDA1.9060208@igs.net>
Source record: 36719

Floyd Davidson wrote:

> That can also be done with a signal generator and almost any kind of
> high impedance RF detector (on a DVM, VTVM, or scope for example).
>
> Wind a coil or grab something from the junk box. Put a known value
> of fixed capacitor across it. Then put a sufficiently large (depends
> on how sensitive the detector is and how much output the signal generator
> has) resistance in series with the signal generator output and connect
> that across the LC parallel circuit. The RF detector will peak at the
> resonant frequency, and the value of the inductor can then be determined
> using the known capacitor and charts. Then substitute the unknown
> capacitor and repeat to determine the value of an unknown capacitor.
>
> Here's a circuit:
>
>
> |\ | 5k 5k
> >---+---| >|---/\/\/\/\/---+---/\/\/\/\/\--------<
> | |/ | |
> | 1N34 +---+---+
> | | |
> Scope | L (| C
> or ----- (----- RF Sig Gen
> VTVM ----- (-----
> | .01mfd (|
> | | |
> | +---+---+
> | |
> >---+----------------------+-----------------------<
>
>
> The 5k values are guestimates, and may not work well if the RF signal
> generator output is too low.
>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

Now there's an idea and a half!! No special equipment required.

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2216. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 13:13:14 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v7m3vvius6o914@corp.supernews.com>
Source record: 36720

Digi-Key Part Number 275-1004-ND
Manufacturer Part Number YE-1157
Description CONN CIRCULAR DIN PLUG 7POS
Quantity Available 201

..

"scharkalvin" <wa2mze@bellsouth.net> wrote in message
news:3E7A7EF7.9070308@bellsouth.net...
> K9SQG wrote:
> > Since these aren't being made anymore, stocks are drying up. Have any
new ones
> > in your junkbox you'd like to sell?
> >
> > 73s,
> >
> > Evan
>
> I think ocean state electronics still has them.
>
>

2217. FS: Two-Way Radio Commerical & Amateur Service Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 19:35:25 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <7WJea.35461$q26.1975743@read1.cgocable.net>
Source record: 36721
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Have acquired a quantity of Commercial & some Amateur, Two Way Radio Service Manuals...Take a look and see if you have a need for any. Am trying to add to my HTML page as time permits.
73...Norm VE3CZI www.rodemi.com

http://home.cogeco.ca/~rodemi/Service%20Manuals/Service%20Manuals.html

2218. Re: rx frontend & filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-21 22:11:43 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e7aaf90$0$874@echo-01.iinet.net.au>
Source record: 36716

I was thinking in terms of the FST 3125 quad switch which does not have a
data selector. If you use the 3253 then the chip itself will do the
selection - I guess this seems the logical choice.
The "Gray Code" issue seems quite important - it can make 20-30 dB
difference in noise according to our experiments.

Richard

Jan Wagner <jwagner@kosh.hut.fi> wrote in message
news:Pine.OSF.4.50.0303201821080.217940-100000@kosh.hut.fi...
>
> On Thu, 20 Mar 2003, Richard Hosking wrote:
> >> Actually, if you draw the DDS I & Q output signals on paper, then
> >> you'll notice it counts "10 11 01 00 ..." - a 2-bit Gray code counter.
> > >
> > OK but note that the duty cycle of the Tayloe LO signals is 25% rather
than
> > 50% - you will have to square up the two outputs and sum them in a quad
NAND
> > gate . But sure - good idea.
>
> It's well possible I'm missing a major point here, but...
>
> I: 1 1 0 0 (sin)
> Q: 1 0 0 1 (cos)
>
> This full 11, 10, 00, 01 count sequence is gone through in a _single_ LO
> cycle => multiplexer lines are changed at 4 x DDS LO. Like in the Johnson
> counter setup clocked at 4 x target freq.
>
> No repetitions inside the "11,10,00,01" sequence => each of the four mux
> outputs will have a duty cycle of 25%, and their frequency is equal to
> the LO/DDS frequency. That's what is required for the Tayloe detector. I'd
> think. Probably. ;o)
>
> The AD9854 has one fast comparator on board, so squaring up the other of
> the I or Q channels requires just one external fast comparator like a
> 900MHz SPT9689. And then the square wave outputs go directly to the
> FST3253 mux.
>
> Flames/comments? ;-)
>
> - Jan
>
> --

> **********
> high voltage at http://www.hut.fi/~jwagner/tesla
> Jan OH2GHR
>

2219. Re: TO220 resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 00:35:20 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <cdOea.22084$S%3.1248431@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36722

Not sure what's available in the UK but here are some in the US...
http://www.caddock.com/

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:5GG9gMHfPde+EwHx@fslife.co.uk...
> Does anyone here in the UK have a minimum of 8 surplus to requirements
> TO220 package, 20w minimum 0.5ohm resistors?
>
> Farnel have them but at a heart rendering price.
>
> Far less costly from distributors but I only require a small quantity.
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

2220. Re: TO220 resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 02:01:12 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <pngn7vgdlcp1b9036ijlgie588er42hc17@4ax.com>
Source record: 36723

On Thu, 20 Mar 2003 14:44:47 +0000, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Does anyone here in the UK have a minimum of 8 surplus to requirements
>TO220 package, 20w minimum 0.5ohm resistors?
>
>Farnel have them but at a heart rendering price.
>
>Far less costly from distributors but I only require a small quantity.
>
>(((73)))

DigiKey is now making an effort to serve the UK market and will price
in GBP and export. http://www.digikey.com/

They have 20w and 35w TO-220 resistors, 0.51 ohms, but the price may
not be all that much better than Farnells. The 35w jobbies are US$7.78
ea, up to quantity 100, whilst the 20 watt variety is $6.73 in
quantity 1-100.

73 de Jack K8ZOA

2221. Re: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 16:19:52 UTC
From: W9GB <w9gb@arrlnospam.net>
Message-ID: <l20fa.201001$S_4.111068@rwcrnsc53>
Source record: 36724

Remove the center pin from an 8-pin DIN plug.

w9gb

"K9SQG" <k9sqg@aol.com> wrote in message
news:20030320185631.24060.00000134@mb-fa.aol.com...
> Since these aren't being made anymore, stocks are drying up. Have any new
ones
> in your junkbox you'd like to sell?
>
> 73s,
>
> Evan

2222. Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 17:19:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5i5s7$28ufnq$1@ID-150848.news.dfncis.de>
Source record: 36725

One seeks easily obtainable (surplus or new) CW and SSB xtal filters that one can obtain without spending quite a lot of much money. That suggests standard filters. Seems that an HF rig, for IF's between say 5Mhz to 21.4 Mhz, 10.7 mhz xtal filters would I be an intelligent choice. Having in mind getting hold of surplus filters, in preference for new, would going for 10.7 Mhz xtal filters be a good decision? I'd imagine 9Mhz filters are less common. I think xtal filters around 455Khz might have better specs, but you cannot of course get good image rejection for such a low IF. For you that do a lot of homebrew, and use surplus CW & SSB filters, what xtal filters seem to be readily available? 10.7 Mhz ones? Or maybe there are plenty of surplus xtal filters kicking around with some other frequency.TIA. Rich

2223. 13.8V 20A Power Supply from Surplus AT Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 17:40:18 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E7CA002.3DD889E7@osite.com.br>
Source record: 36726

Inspired by some articles posted on this NG (thank God I've got news!)
I'll start modifying a surplus AT power supply to power my IC-735.

Being a licensed ham for more than 7 years now, I was somewhat frustrated for not having much "on air" experience. Now, with this project at hand, I'm felling like a real ham.

I plan to follow the mod scheme in http://www.qsl.net/vk4ba/projects/index.html, as posted past week in the NG.

I'll post project comments, problems and progress here. I expect to be more of the latter.

If anyone do have any comments, suggestions or just wish to say something, please do!

The AT supplies I have are rated 220W and 300W. I'm not sure which one I'll start hacking at first...

VY 73 DE
PU2PIX
(upgrading soon!)
--
Paulo E.P. Marcondes
pepm@osite.com.br

2224. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 20:10:32 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5ifs5$29ubbb$1@ID-150848.news.dfncis.de>
Source record: 36727

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b5i5s7$28ufnq$1@ID- Or maybe there are plenty of surplus
> xtal filters kicking around with some other frequency.TIA. Rich

I'm thinking that someone is going to say something like,"Yep
there are lots of surplus CW/SSB 10.7 Mhz xtal filters around".
But maybe what's typically easily available are not standard xtal
filters, that were produced for some radio manufacturer.
(Standard xtal filters being those at 455, 10.7, 21.4 Mhz or
whatever is a standard IF).

2225. ham stuff on ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 20:11:47 UTC
From: eimacman@aol.com
Message-ID: <20030322151147.06546.00000032@mb-ci.aol.com>
Source record: 36728

http://cgi6.ebay.com/ws/eBayISAPI.dll?ViewSellersOtherItems&include=0&user
id=dodgeman7&sort=3&rows=25&since=-1&rd=1

NEW WIDE SSB INRAD FILTER FOR KENWOOD
-

TWO..... JRC NIR 10 NR 10 units -

fil transfomer 12volt at 10 amps
-

big egg insulators for towers or ??? dutch
-

DRAKE MIC PLUG 90 DEG

DRAKE MIC PLUG 90 DEG USED
-

DRAKE MIC PLUG NEW

DRAKE L4B AMP RELAY PLUG RARE!!!!!!!!

FINGER STOCK NEW
-

NEAT LIGHTS FOR YOUR HOMEBREW
-

BIG BUNCH OF SPRAGUE CAPACITORS

3 BIG TORRIODS CORES -

2226. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 21:43:46 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7CD912.8080708@bellsouth.net>
Source record: 36729

Richard wrote:
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b5i5s7$28ufnq$1@ID- Or maybe there are plenty of surplus
>
>>xtal filters kicking around with some other frequency.TIA. Rich
>
>
> I'm thinking that someone is going to say something like,"Yep
> there are lots of surplus CW/SSB 10.7 Mhz xtal filters around".
> But maybe what's typically easily available are not standard xtal
> filters, that were produced for some radio manufacturer.
> (Standard xtal filters being those at 455, 10.7, 21.4 Mhz or
> whatever is a standard IF).
>

Or use a high frequency 'roofing filter' and up-convert first, then down convert to 455khz where
mech and pizzo filters are commonly available. For example, 45mhz xtal filters with a bw of about
15 to 60 khz are available (surface mount type from Digikey) which will eliminate a first image
problem when down converting to 455khz. A mixer with good isolation between the ports is required
as the injection frequency is close to the IF frequency. DB diode mixers are good here. A receiver
with no rf stage followed by two DB diode mixers (mini circuits) can have good dynamic range
and selectivity using such a roofing filter and a good 455khz if filter. Surplus Collins mech. filters
or newer ceramic filters show up on ebay all the time. SSB bw of 2.1khz, AM bw of 4khz (or 6khz
for 'hi-fi') are available. Use two if filters with one at the input to the first if, and a second filter
either between if stages or just before the detector for steeper 'walls'. Using two filters will let you
use wider bandwidth while keeping adjacent channel rejection because the 'walls' are steeper.

just my thoughts on the matter.....

2227. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 22:35:59 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b5iogf$9hu$1@freenet9.carleton.ca>
Source record: 36730

scharkalvin (wa2mze@bellsouth.net) writes:
> Richard wrote:
>> "Richard" <nearlynews_email@ntlworld.com> wrote in message
>> news:b5i5s7$28ufnq$1@ID- Or maybe there are plenty of surplus
>>
>>>xtal filters kicking around with some other frequency.TIA. Rich
>>
>>
>> I'm thinking that someone is going to say something like,"Yep
>> there are lots of surplus CW/SSB 10.7 Mhz xtal filters around".
>> But maybe what's typically easily available are not standard xtal
>> filters, that were produced for some radio manufacturer.
>> (Standard xtal filters being those at 455, 10.7, 21.4 Mhz or
>> whatever is a standard IF).
>>
>
> Or use a high frequency 'roofing filter' and up-convert first, then down
> convert to 455khz where
> mech and pizzo filters are commonly available. For example, 45mhz xtal
> filters with a bw of about
> 15 to 60 khz are available (surface mount type from Digikey) which will
> eliminate a first image
> problem when down converting to 455khz. A mixer with good isolation
> between the ports is required
> as the injection frequency is close to the IF frequency. DB diode
> mixers are good here. A receiver
> with no rf stage followed by two DB diode mixers (mini circuits) can
> have good dynamic range
> and selectivity using such a roofing filter and a good 455khz if filter.
> Surplus Collins mech. filters
> or newer ceramic filters show up on ebay all the time. SSB bw of
> 2.1khz, AM bw of 4khz (or 6khz
> for 'hi-fi') are available. Use two if filters with one at the input to
> the first if, and a second filter
> either between if stages or just before the detector for steeper
> 'walls'. Using two filters will let you
> use wider bandwidth while keeping adjacent channel rejection because the
> 'walls' are steeper.
>
>
> just my thoughts on the matter.....
>
>
For forty years, even a bit more, you could make or buy crystal filters

in the HF range suitable for SSB operation. It was a major leap forward, because you know longer had to worry about image rejection, via heavy front end filters or an extra conversion. It made the rigs simpler

Too much receiver "design" is based on "if this is good, that is better", rather than looking at the specific needs and the tradeoffs. There are good reasons for an upconversion, but there are also tradeoffs. There is plenty of good reason to use a filter somewhere in the HF range. There are tradeoffs, but how serious are they for an amateur receiver or transmitter? Unlike a general coverage receiver, you don't have to worry about holes in the tuning range, and since the ham bands are small parts of the HF spectrum, it is easier to plan around spurious responses. In return, you get a simpler design, in terms of circuitry and in terms of unwanted products, and if someone is just building a single band unit, the local oscillator can be much simpler, since it doesn't have to run in the low VHF range.

As I've said before, if you need multiple bandwidths, for FM, AM and SSB, then you may need to pursue other paths, becuase you can't get the needed filters at the desired IF frequency, or they are too costly. But if it's just an SSB rig, there have been plenty of rigs made with a single crystal filter in the HF range.

If you want to do something tricky, like passband tuning, then I don't think you have much choice but to go to multiple conversions, though I'm not sure the common scheme needs to be followed with modern oscillator schemes.

And Richard's problem, at least up till now, has been that he has been thinking in terms of modifying an existing rig, so he is stuck with the IF that he uses. When building something, one has the luxury of using what's available (issues of spurious responses aside), rather than trying to buy a filter at a given frequency.

So one could go and buy a replacement SSB filter from one of the commercial rig manufacturers, assuming they still have filters in the HF range. It will likely cost a lot.

One could find a surplus filter somewhere. Considering the state of homebrew, is it not possible that there are more than enough SSB filters in the HF range to go around? You use to be able to buy them new, for the purpose of building something. Have they all been thrown out? There used to be surplus SSB filters available, from who knows what source. There was surplus that came from ham manufacturers. Someone took a filter out of their rig, replacing it with a better one, and what happens to the original? How many KVG, McCoy and Snelgrove 9MHz crystal filters are just waiting to be used?

New stock, or new old stock, would tend to be on nice round frequencies. 9MHz most likely, maybe some at 5MHz, and I thought some were made at

10.7MHz. It seems to me that many of the commercial rigs used oddball frequencies, so you'd find 5.xxxMHz filters out of old Swan rigs.

And with the introduction of ladder filter techniques to amateur radio, it seems like crystal filter building has become far more doable than forty years ago when crystal lattice filters were the norm, and you'd have to grind your own crystals to get them on frequency. With a simple design, one could even build a ladder filter at one frequency, and then when a better commercial filter comes along, then do the minor reworking to adapt to the new IF.

There are plenty of good reasons for a single conversion receiver, and once one understands the limitations, they can judge whether it's the best choice. There are also good reasons for a double conversion receiver, in the past due to need, in the present because it brings something that couldn't be done, or done easily, with single conversion. But I don't think it's right to jump to double conversion without spending time looking at the other possibilities.

Micahel VE2BVW

2228. Proper way to specify SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 23:09:50 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5iqcv$2a12b2$1@ID-150848.news.dfncis.de>
Source record: 36731

I didn't realise it before, but you don't specify the center
frequency, but the carrier frequency of the SSB signal. Makes
sense I suppose.

2229. POLL: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 23:26:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5ircm$28543a$1@ID-150848.news.dfncis.de>
Source record: 36732

All you home-brewers out there, what have you got in your junk/surplus box, in the way of CW/SSB filters? I'm trying to do a poll just to see what turns up. TIA. Rich.

2230. Re: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 23:33:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5iroc$2a4vib$1@ID-150848.news.dfncis.de>
Source record: 36733

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b5ircm$28543a$1@ID-150848.news.dfncis.de...
> All you home-brewers out there, what have you got in your
> junk/surplus box, in the way of CW/SSB filters? I'm trying to
do
> a poll just to see what turns up. TIA. Rich.

Actually, be best just going to ebay and see what tends to turn
up.

2231. Re: Proper way to specify SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-22 23:52:42 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e7cf732$0$130$edfadb0f@dtext02.news.tele.dk>
Source record: 36734

Helleo

> I didn't realise it before, but you don't specify the center
> frequency, but the carrier frequency of the SSB signal. Makes
> sense I suppose.

One benefit is that the same filter works on both USB, LSB and DSB.

Regards Max

2232. Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 00:37:11 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E7D06B0.4070003@invalid.invalid>
Source record: 36735

I'm wondering if anyone has any pointers to code for predicting the field strength of a VHF/UHF signal given power, antenna height, distance, and frequency? Especially in Perl or BASIC but I can deal with C and Pascal.

I've got the FCC's (USA) "Curves" program but it's got a double whammy - it's Fortran (which I more or less knew 30 years ago...) and it's nearly illegible in many places. (it's a scan of a printout...)

Extreme accuracy is not important. Basically I'm wanting to pull data on a station from the FCC database and make a good guess as to whether it's audible at a given location.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2233. Re: TO220 resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 01:31:32 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <I4dRfSL05Qf+Ewa6@fslife.co.uk>
Source record: 36736

>>Does anyone here in the UK have a minimum of 8 surplus to requirements
>>TO220 package, 20w minimum 0.5ohm resistors?
>>
>>Farnel have them but at a heart rendering price.
>>
>>Far less costly from distributors but I only require a small quantity.
>>
>>(((73)))
>
>DigiKey is now making an effort to serve the UK market and will price
>in GBP and export. http://www.digikey.com/
>
>They have 20w and 35w TO-220 resistors, 0.51 ohms, but the price may
>not be all that much better than Farnells. The 35w jobbies are US$7.78
>ea, up to quantity 100, whilst the 20 watt variety is $6.73 in
>quantity 1-100.
>
>73 de Jack K8ZOA
Thanks guys.

You're right Jack.

By the time import charges are added the price is very similar.

I may end up using a less expensive type.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2234. Re: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 01:40:49 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E7D10A2.97637B29@silverstar.com>
Source record: 36737

Try Wylie, Arrow, etc.

> http://www.newark.com or Cat. 119 @ pp. 136,

2235. Re: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 01:41:19 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E7D10BF.7E13D937@silverstar.com>
Source record: 36738

Try Wylie, Arrow, etc.

> http://www.newark.com or Cat. 119 @ pp. 136,

2236. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 01:43:02 UTC
From: bjorn890@aol.com57445747
Message-ID: <20030322204302.23601.00000161@mb-ml.aol.com>
Source record: 36740

Try din.de
The scientists who invented them probebly have them for a reasonable price.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

2237. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 01:43:03 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E7D1129.50910699@silverstar.com>
Source record: 36739

Try www.ArrowElectronics.com, www.Newark.com, www.Wylie.com

K9SQG wrote:

> Since these aren't being made anymore, stocks are drying up. Have any new ones
> in your junkbox you'd like to sell?
>
> 73s,
>
> Evan

2238. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 02:59:40 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v7q8sv17l822b2@corp.supernews.com>
Source record: 36742

I think you will find that there are plenty of 10.7 MHz filters out there, but they are wide as a barn door. Although 10.7 is a very popular IF for FM broadcast receivers, it never seemed to be all that popular for amateur rigs.

I am guessing you'll find plenty of 9 MHz filters out there, and of course, plenty of 455 kHz. If you want a simple design, 9 MHz isn't usually a bad choice. However, if you want steep skirts, 455 is nicer. Unfortunately, image problems mean that you will likely end up with a double, or triple conversion design.

..

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b5i5s7$28ufnq$1@ID-150848.news.dfncis.de...
> One seeks easily obtainable (surplus or new) CW and SSB xtal
> filters that one can obtain without spending quite a lot of much
> money. That suggests standard filters. Seems that an HF rig,
> for IF's between say 5Mhz to 21.4 Mhz, 10.7 mhz xtal filters
> would I be an intelligent choice. Having in mind getting hold of
> surplus filters, in preference for new, would going for 10.7 Mhz
> xtal filters be a good decision? I'd imagine 9Mhz filters are
> less common. I think xtal filters around 455Khz might have
> better specs, but you cannot of course get good image rejection
> for such a low IF. For you that do a lot of homebrew, and use
> surplus CW & SSB filters, what xtal filters seem to be readily
> available? 10.7 Mhz ones? Or maybe there are plenty of surplus
> xtal filters kicking around with some other frequency.TIA. Rich

2239. Re: Tayloe Mixer and "Gray Code" noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 03:44:46 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <IY9fa.60853$Dp.19938@fe01.atl2.webusenet.com>
Source record: 36743

"Richard Hosking" <richardh@iinet.net.au> wrote in message
news:3e7d1672$0$3756@echo-01.iinet.net.au...
> Has anyone got any ideas? Is this a real problem?
>

Yes, it is a real problem. That is the very reason for the Grey Codes.

Jim
N8EE

2240. Re: Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 03:46:11 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <1_9fa.60856$Dp.60814@fe01.atl2.webusenet.com>
Source record: 36744

There is a program already available that will do it, so you don't have to
write your own.

Check out RadioMobile at http://www.cplus.org/rmw/english1.html

Jim
N8EE

"Doug Smith W9WI" <w9wi@invalid.invalid> wrote in message
news:3E7D06B0.4070003@invalid.invalid...
> I'm wondering if anyone has any pointers to code for predicting the
> field strength of a VHF/UHF signal given power, antenna height,
> distance, and frequency? Especially in Perl or BASIC but I can deal
> with C and Pascal.
>
> I've got the FCC's (USA) "Curves" program but it's got a double whammy -
> it's Fortran (which I more or less knew 30 years ago...) and it's nearly
> illegible in many places. (it's a scan of a printout...)
>
> Extreme accuracy is not important. Basically I'm wanting to pull data
> on a station from the FCC database and make a good guess as to whether
> it's audible at a given location.
> --
> Doug Smith W9WI
> Pleasant View (Nashville), TN EM66
> http://www.w9wi.com
>

2241. Re: POLL: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 06:14:50 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3E7D50DA.AD6752A8@sympatico.ca>
Source record: 36745

Richard wrote:
>
> All you home-brewers out there, what have you got in your
> junk/surplus box, in the way of CW/SSB filters? I'm trying to do
> a poll just to see what turns up. TIA. Rich.

Since you ask:

3 or 4 Collins mechanicals plus a few more on boards from transceivers
withdrawn from serviice,
About a dozen Kokusai,
One FoxTango - NIB
One, crystal 2.1, manufacturer eludes me now and its 1am so I ain't
gonna go look it up.
A couple of crystal filters for a 5.1MHz IF by Konel IIRC.

All the above SSB - some USB or LSB; and even a couple of Collins AM
mechanicals.

That's not inlcluding ones currently in use.

Dave

2242. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 07:02:49 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5jm38$2a9h4q$1@ID-150848.news.dfncis.de>
Source record: 36746

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
> If you want to do something tricky, like passband tuning, then
I
> don't think you have much choice but to go to multiple
conversions,
> though I'm not sure the common scheme needs to be followed with
> modern oscillator schemes.

If you have double conversion with say a 8Khz BW xtal filter in
1st RF:

You do not change 1st LO at all when receiving CW, USB or LSB.
So frequency readout stays same no matter what mode.

Using VXO in 2nd L.O. you can place received carrier at any point
within the passband of a 455 Khz CW filter. Or at either side
and with some possibility of variation where the carrier is put
of a SSB filter. The BFO that replaces the carrier for SSB
remains unchanged.

Possibly 455 Khz filters are marginally better then 9 Mhx xtal
filters.

* I think that is passband tuning.

2243. Re: How to?: connect headphone-out into microphone-in (volt,amp,Z mismatches!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 07:06:32 UTC
From: dkcombs@panix.com
Message-ID: <b5jmdo$6kj$1@reader2.panix.com>
Source record: 36647
Cross-posted to: alt.home.repair,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,sci.electronics.design,sci.electronics.repair

```
In article <b4m2rs$581$1@eskinews.eskimo.com>,
Mark Zenier <mzenier@eskimo.com> wrote:
>
>Here's how I did it, the line out from the computer to a 25 year old
>Panasonic "shoebox" cassette recorder's microphone input.
>
>
>
> +---------
> | mic in
>Left --/\/\/\----+ .01 uF V
>Right --/\/\/\----+-----||-------/\/\/\--+----
> 56k ohms (both) 10k ohms |
>gnd |
>----------------------------------------+
>
>The very small capacitor value is to compensate for the huge bass boost on
>the input. Given the age of the recorder, I assume that, although it has
>a built in electret mic, the external input was for a dynamic microphone.
>
>Mark Zenier mzenier@eskimo.com Washington State resident

Sorry to not have seen this sooner -- I thought
the final post had been done some time ago.

Thanks for the schematic.

Question: the left, you have it going through the
56k omhs to what? Seems to stop mid-air.

Or do the two join together after each go through
their own resisters?

Thanks

David

---

My plan was to head over to radio shack tomorrow and
get the earlier-suggested attenuator cable. Which
I'll probably do, unless everyone from before
follows up and says to go your route.
```

Thanks again!

2244. Re: POLL: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 07:40:52 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e7d631f.957519@news.freeserve.net>
Source record: 36648

ok, these are all xtal filters
21.4 20khz (uhf FM 50Khz channels)
10.7 8Khz (vhf FM 25khz channels)
10.7 3kz (ex CB ssb/am)
9.00mhz 2.5khz (new amateur ssb)
9.00mhz 500hz (new amateur cw)
7.8mhz 3khz(ex cb ssb)
455khz 500hz (ex ft102 cw)

also numerous ceramic and mechanical filters.

On Sun, 23 Mar 2003 01:14:50 -0500, Dave Holford
<holford@sympatico.ca> wrote:

>
>
>Richard wrote:
>>
>> All you home-brewers out there, what have you got in your
>> junk/surplus box, in the way of CW/SSB filters? I'm trying to do
>> a poll just to see what turns up. TIA. Rich.
>
>
>Since you ask:
>
>3 or 4 Collins mechanicals plus a few more on boards from transceivers
>withdrawn from serviice,
>About a dozen Kokusai,
>One FoxTango - NIB
>One, crystal 2.1, manufacturer eludes me now and its 1am so I ain't
>gonna go look it up.
>A couple of crystal filters for a 5.1MHz IF by Konel IIRC.
>
>All the above SSB - some USB or LSB; and even a couple of Collins AM
>mechanicals.
>
>That's not inlcluding ones currently in use.
>
>Dave

2245. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 08:15:00 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e7d6a51.2800730@news.freeserve.net>
Source record: 36649

Me again,
Firstly, thankyou all for your help so far.

I'm now looking for any references to using overtone xtals at their overtone frequency for xtal filters. There does'nt appear to be much on the web about it.

I could also use a copy of QEX June 1995 pp 16-21 article entitled "Refinements in crystal ladder filter design" by W Hayward W7ZOI

If anyone has a scan of this article or a URL of its location I would be most appreciative.

cheers and beers, Mike W G8NXD qthr
--
On Mon, 17 Mar 2003 14:40:36 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:

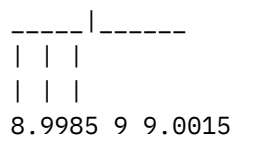
>Hi Folks,
>I just bought 100 xtals on 70.7Mhz from Ebay UK, I assume they are
>either 3rd or 5th overtone, anyway, I've been looking for ladder
>filter designs, calculations etc.
>Mention is made about selecting xtals within 50Hz and similar, low,
>ESR.
>My questions are, should the frequency selection be for parallel or
>series resonance and how do you measure the ESR of a crystal ?.
>thanks Mike W, G8NXD aka M3MSM qthr
>

2246. Re: Proper way to specify SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 08:43:04 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b5js2o$27i$1@freenet9.carleton.ca>
Source record: 36650

"Max" (Max_Jens@post9.tele.dk) writes:
> Helleo
>
>> I didn't realise it before, but you don't specify the center
>> frequency, but the carrier frequency of the SSB signal. Makes
>> sense I suppose.
>
> One benefit is that the same filter works on both USB, LSB and DSB.
>
> Regards Max
>
Wait, there can be a mix of how this is specified.

There are plenty filters where the center frequency is specified.
9MHz filters, and plenty of 455KHz filters. There were plenty of
KVG and McCoy filters sold that were 9MHz filters, yet the
carrier crystals that came with them were 9.0015MHz and 8.9985MHz.
The 9MHz was the center frequency, with the edges of the curve half
the bandwidth away. The crystal frequencies sat on the slope of the
curve. Most 455KHz filters are specified the same way. These filters
are suppose to have a symmetrical passband. If you need to switch
sidebands, you switch the carrier oscillator.



But, there are also cases where the specified frequency is actually
one slope of the filter, rather than the center frequency. This would
be the case if there were a pair of filters, one for upper sideband
and one for lower sideband. The carrier oscillator would be right
on the center point. The slopes of the filters would overlap, right
at that carrier frequency. The other edge of the filter would be
the full bandwidth of the filter away, with the furthest edge of
one filter being below the carrier frequency, and the furthest
edge of the other being above the carrier frequency. If you
need to switch sidebands, you switch filters. Or, since filters are
expensive, likely (but not always) this particular rig can do ISB, ie have
a signal on the lower sideband and have a different signal on the upper
sideband.

8.997 9 9.003

Another case for this scenario (though I'm not sure they'd always be specified by the frequency of the bandwidth edge) is if the filter was assymetrical in response. In that case, switching the carrier oscillator to the other side of the filter passband would not provide the best results. One slope of the filter would be very sharp, and you'd place the carrier there, and the other slope would be more vague. So you'd either need another filter for the other sideband, or use some inversion somewhere along the line to get the other sideband.

Michael VE2BVW

2247. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 08:53:07 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <A2XmUqCzXXf+EAbx@ifwtech.co.uk>
Source record: 36657

K9SQG wrote:
>Since these aren't being made anymore, stocks are drying up.

Where did you hear this?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2248. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 09:45:55 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87of422z70.fld@barrow.com>
Source record: 36651

"Richard" <nearlynews_email@ntlworld.com> wrote:
>"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
>> If you want to do something tricky, like passband tuning, then I
>> don't think you have much choice but to go to multiple conversions,
>> though I'm not sure the common scheme needs to be followed with
>> modern oscillator schemes.
>
>
>If you have double conversion with say a 8Khz BW xtal filter in
>1st RF:

Here's another idea, adding variable bandwidth to the variable
passband tuning.

Triple conversion, with only two filters, which could be
anything from 3 to 8 kHz wide depending on whether AM is desired
or not. There would be one filter at each of the first IF and
second IF, and no filter at the third IF,

This will provide, with only two filters, a receiver with both
passband tuning and variable bandwidth, though the narrow
bandwidth will not have the same quality that a separate filter
would provide. (Which might be correctable using only an LC
filter at the 3rd IF, switched in for narrow bandwidth only.)

>You do not change 1st LO at all when receiving CW, USB or LSB.
>So frequency readout stays same no matter what mode.
>
>Using VXO in 2nd L.O. you can place received carrier at any point
>within the passband of a 455 Khz CW filter. Or at either side

The second IF would be near the first IF, say 48 kHz higher.

(That would allow use of 4kHz wide filters at 8 mHz, meant for
telco channel banks. The rest of this description will assume 4
kHz wide filters.)

>and with some possibility of variation where the carrier is put
>of a SSB filter. The BFO that replaces the carrier for SSB
>remains unchanged.

The BFO would be at 48 kHz, with a tunable range equal to the
width of the filters, and additionally would be injected into
the 2nd mixer to move the received carrier to the 2nd IF filter
frequency.

The third mixer would have a VXO 48 kHz higher than the 2nd IF, also with a tuning range equal to that of the filters, making the 3rd IF 48 kHz.

The BFO would then be used with a product detector to convert the 48 kHz IF to audio.

Tuning the 4 kHz range of the BFO would move the received carrier within the 4 kHz filter passband.

Tuning the 4 kHz range of the VXO would move the overlap of the two filters. With the VXO at 48 kHz above the 2nd IF, the two 4 kHz filters exactly overlap and a bandwidth of something just less that 4 kHz would be available. As the VXO frequency is adjusted away from 48 kHz above the 2nd IF, the area of overlap for the two filters is reduced until at 4 kHz higher (or lower), the upper edge of one filter meets the lower edge of the other filter.

>Possibly 455 Khz filters are marginally better then 9 Mhx xtal
>filters.

Some 7-9 mHz filters might be better than some 455/500 kHz filters.

>* I think that is passband tuning.

I've never looked at various filter characteristics to see which filters might or might not be best for such a design. It's just something I've always been going to look at closer and never have. While I mentioned telco voice channel filters, that is only because I'm aware that there must be millions of them available from old analog multiplex systems. I've never compared such things as the skirt selectivity and ripple to modern filters intended for SSB, and that would be necessary before choosing filters.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2249. Re: Choice of standard crystal filter [CW & SSB]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 10:19:24 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5k1jt$2a30c1$1@ID-150848.news.dfncis.de>
Source record: 36652

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b5jm38$2a9h4q$1@ID-150848.news.dfncis.de...

>
> Using VXO in 2nd L.O. you can place received carrier at any
point
> within the passband of a 455 Khz CW filter. Or at either side
> and with some possibility of variation where the carrier is put
> of a SSB filter. The BFO that replaces the carrier for SSB
> remains unchanged.
>
> * I think that is passband tuning.

If you use a 2nd IF VXO so carrier is moveable across the
passband of the filter, I believe that is passband tuning.

However you must have a variable BFO to track with the carrier.
So if normally, ssb signal carrier (if there was one, it's
suppressed) would land at 456.5 Khz, the BFO has to be at 456.5
Khz. Alter 2nd IF VXO so carrier lands at say 456 Khz,
(different place in the passband) you have to adjust BFO to 456
Khz.

2250. Re: Proper way to specify SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 10:33:19 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5k2e1$2aeofe$1@ID-150848.news.dfncis.de>
Source record: 36653

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b5iqcv$2a12b2$1@ID-150848.news.dfncis.de...
> I didn't realise it before, but you don't specify the center
> frequency, but the carrier frequency of the SSB signal. Makes
> sense I suppose.

Actually if you specify ssb filter frequency as a carrier
frequency of a ssb signal, you could have two carrier
frequencies, one on low side, one on high side. So if center
frequency was 455 Khz how is this described? Either 453.5 Khz
(say) or 456.5 Khz (say). Probably 455 Khz. But that is not a
ssb carrier frequency for a filter whose centre is 455 Khz.
Unless a ssb filter has a preferred side for the carrier and the
preffered side is quoted (Dishal?). Reason I mention this is I
read somewhere about ssb filters being specified by ssb carrier.

2251. Re: Crystal selection for ladder filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 11:57:40 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Uihfa.188415$eG2.25952@sccrnsc03>
Source record: 36654

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3e7d6a51.2800730@news.freeserve.net...
> Me again,
> Firstly, thankyou all for your help so far.
>
> I'm now looking for any references to using overtone xtals at their
> overtone frequency for xtal filters. There does'nt appear to be much
> on the web about it.

Robert G. Kinsman. Crystal Filters, Design, manufacture and application.

W4ZCB

>
> I could also use a copy of QEX June 1995 pp 16-21 article entitled
> "Refinements in crystal ladder filter design" by W Hayward W7ZOI

If you buy Haywards "Introduction to RF Design", you not only get the
instructions on how to do the measurements, but also software (L.EXE and
X.EXE) that does the number crunching for you.

W4ZCB

>
> If anyone has a scan of this article or a URL of its location I would
> be most appreciative.
>
> cheers and beers, Mike W G8NXD qthr
> --
> On Mon, 17 Mar 2003 14:40:36 GMT, mike@corn2.freeserve.co.uk (Mike W)
> wrote:
>
> >Hi Folks,
> >I just bought 100 xtals on 70.7Mhz from Ebay UK, I assume they are
> >either 3rd or 5th overtone, anyway, I've been looking for ladder
> >filter designs, calculations etc.
> >Mention is made about selecting xtals within 50Hz and similar, low,
> >ESR.
> >My questions are, should the frequency selection be for parallel or
> >series resonance and how do you measure the ESR of a crystal ?.
> >thanks Mike W, G8NXD aka M3MSM qthr
> >
>

2252. Re: POLL: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 11:59:58 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <2lhfa.192679$3D1.38607@sccrnsc01>
Source record: 36655

Would you care to sell the 10.7 @ 8 KHz?

W4ZCB

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3e7d631f.957519@news.freeserve.net...
> ok, these are all xtal filters
> 21.4 20khz (uhf FM 50Khz channels)
> 10.7 8Khz (vhf FM 25khz channels)
> 10.7 3kz (ex CB ssb/am)
> 9.00mhz 2.5khz (new amateur ssb)
> 9.00mhz 500hz (new amateur cw)
> 7.8mhz 3khz(ex cb ssb)
> 455khz 500hz (ex ft102 cw)
>
> also numerous ceramic and mechanical filters.
>
>
> On Sun, 23 Mar 2003 01:14:50 -0500, Dave Holford
> <holford@sympatico.ca> wrote:
>
> >
> >
> >Richard wrote:
> >>
> >> All you home-brewers out there, what have you got in your
> >> junk/surplus box, in the way of CW/SSB filters? I'm trying to do
> >> a poll just to see what turns up. TIA. Rich.
> >
> >
> >Since you ask:
> >
> >3 or 4 Collins mechanicals plus a few more on boards from transceivers
> >withdrawn from serviice,
> >About a dozen Kokusai,
> >One FoxTango - NIB
> >One, crystal 2.1, manufacturer eludes me now and its 1am so I ain't
> >gonna go look it up.
> >A couple of crystal filters for a 5.1MHz IF by Konel IIRC.
> >
> >All the above SSB - some USB or LSB; and even a couple of Collins AM
> >mechanicals.
> >
> >That's not inlcluding ones currently in use.
> >

> >Dave
>

2253. Re: POLL: CW/SSB filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 12:22:21 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5k8qd$2a5vlq$1@ID-150848.news.dfncis.de>
Source record: 36656

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:2lhfa.192679$3D1.38607@sccrnsc01...
> Would you care to sell the 10.7 @ 8 KHz?
>
> W4ZCB
>

Hehe. That is a good one for a 1st IF, real selectivity occuring
at 455. Kinda thing I was musing
over. :c)

Then again, if one could go for the two 9 Mhz filters,
selectivity being acheived at 9 mhz.

One wonders if Mike would sell the 9 Mhz filters. Although I
think I'm tempted to go for real selectivity at 455.

Rich.

> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3e7d631f.957519@news.freeserve.net...
> > ok, these are all xtal filters
> > 21.4 20khz (uhf FM 50Khz channels)
> > 10.7 8Khz (vhf FM 25khz channels)
> > 10.7 3kz (ex CB ssb/am)
> > 9.00mhz 2.5khz (new amateur ssb)
> > 9.00mhz 500hz (new amateur cw)
> > 7.8mhz 3khz(ex cb ssb)
> > 455khz 500hz (ex ft102 cw)
> >
> > also numerous ceramic and mechanical filters.

2254. Re: Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 14:09:14 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E7DC518.7080706@invalid.invalid>
Source record: 36658

JLB wrote:
> There is a program already available that will do it, so you don't have to
> write your own.
>
> Check out RadioMobile at http://www.cplus.org/rmw/english1.html

Link appreciated - we use this one at work.

Unfortunately..

- I use Linux at home; this is a Windows application.
- I'm trying to embed this algorithm in my own program. (i.e., I need
the source code. Or even just the formulas.)

I'm tempted to just start typing datapoints from the F(50,50) curves in
the FCC regulations and create a lookup table... or see if I can get
"wget" to throw the appropriate parameters at the online version on the
FCC website & create a lookup table that way...
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2255. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 14:16:54 UTC
From: k9sqg@aol.com
Message-ID: <20030323091654.18123.00000321@mb-fg.aol.com>
Source record: 36659

I talked with several electronics supply houses in Dayton, Ohio and they told me that the 7 pin DIN has been discontinued although other pin configurations were still being made. This may or may not be true but there are no local sources for this connector although I have found some mail order houses thanks to the kind replies of people participating in this newsgroup.

73s,

Evan

2256. Re: Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 14:35:55 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <0ihr7v0v87n9n6s1dat3j6s215jem13dpt@4ax.com>
Source record: 36660

You could run it on Wine

On Sun, 23 Mar 2003 14:09:14 GMT, Doug Smith W9WI
<w9wi@invalid.invalid> wrote:

>JLB wrote:
>> There is a program already available that will do it, so you don't have to
>> write your own.
>>
>> Check out RadioMobile at http://www.cplus.org/rmw/english1.html
>
>Link appreciated - we use this one at work.
>
>Unfortunately..
>
>- I use Linux at home; this is a Windows application.
>- I'm trying to embed this algorithm in my own program. (i.e., I need
>the source code. Or even just the formulas.)
>
>I'm tempted to just start typing datapoints from the F(50,50) curves in
>the FCC regulations and create a lookup table... or see if I can get
>"wget" to throw the appropriate parameters at the online version on the
>FCC website & create a lookup table that way...

2257. Re: WTB: 7 pin DIN plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 14:36:25 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <UfRz+DLpZcf+EArY@ifwtech.co.uk>
Source record: 36661

K9SQG wrote:
>I talked with several electronics supply houses in Dayton, Ohio and they told
>me that the 7 pin DIN has been discontinued although other pin configurations
>were still being made. This may or may not be true but there are no local
>sources for this connector although I have found some mail order houses thanks
>to the kind replies of people participating in this newsgroup.

It sounds like your local suppliers may all order from the same source.
Opening a European catalog finds several different sources for the whole
range, in different styles and quality.

The one that *is* becoming hard to find is the 8-pin "horseshoe" type,
as used by Yaesu transceivers for the BAND DATA/PTT output. In Britain
we seem to be down to one supplier for that, and I've never seen a
metal-bodied version.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2258. Tayloe Mixer and "Gray Code" noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 18:04:55 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e7d1672$0$3756@echo-01.iinet.net.au>
Source record: 36741

Dear all

I am in the process of designing a general coverage SSB TX/RX based on this mixer using a quad bus switch
-either FST3125 or FST3253
I have been working with Rod Green VK6KRG
We have found a dramatic difference in the mixer noise between two designs - in the order of 20-30 dB
It may be other factors, but among other things one of the differences between the two prototypes was that one quadrature mixer used a "Gray Code" sequence in the LO and the other didnt
A standard 2 bit binary sequence is 00 01 10 11 - this is what is generated by a 74161 or 74163
Note that both bits change state between 01 and 10 - my thesis is that there is transition timing jitter varying between the two gates and this mixes together to produce noise
If a "Gray Code" sequence is used such as 00 01 11 10 then this effect should not happen.

Has anyone got any ideas? Is this a real problem?

I plan to use a 74AC74 as a Johnson ring counter and use this to drive the 2 bit address selector of the FST3253. This will produce a divide by 4 quadrature LO.
I would be interested if anyone is doing a similar project.

Richard

2259. FS: 1000's of TUBES @ very low prices.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 19:29:02 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <yUnfa.79$K05.29@fed1read04>
Source record: 36662
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list of receiving, TV & special purpose tubes. Sorry no transmitting output tubes.

2260. seeking marantz 2385

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 22:42:58 UTC
From: Louis <lou1@westnet.com>
Message-ID: <SLqfa.106$a52.102912@monger.newsread.com>
Source record: 36663

does anyone have a marantz 2385 for sale? please email me
thanks

louis

2261. UTC CV P 4 xfmr Need Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-23 22:47:49 UTC
From: Chuck <w9ub@wi.rr.com>
Message-ID: <XOqfa.19373$ug5.901673@twister.kc.rr.com>
Source record: 36664

I have a UTC CV-P-4 transformer and need to know if it is a modulation transformer ? Everyone tells me that UTC used "M" for modulation. This "P" has sixteen terminals and does look like a modulation transformer. Anyone know about the
"CV P 4" ?
Thank you.
Chuck W9UB

2262. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 00:29:49 UTC
From: Don Lancaster <don@tinaja.com>
Message-ID: <3E7E517D.2BB1B17A@tinaja.com>
Source record: 36665
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Tarmo Tammaru wrote:
>
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

A Chevvy V8 on a Harley, obviously.

--
Many thanks,

Don Lancaster
Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462

Please visit my GURU's LAIR web site at http://www.tinaja.com

2263. Re: UTC CV P 4 xfmr Need Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 00:37:37 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <1iks7v0q29aoq9mcbce8ji4qgrmmp0kk13@4ax.com>
Source record: 36666

On Sun, 23 Mar 2003 16:47:49 -0600, "Chuck" <w9ub@wi.rr.com> wrote:

| I have a UTC CV-P-4 transformer and need to know if it is a modulation
|transformer ? Everyone tells me that UTC used "M" for modulation. This "P"
|has sixteen terminals and does look like a modulation transformer. Anyone
|know about the
|"CV P 4" ?
|Thank you.
|Chuck W9UB
|

From my handy 1966 UTC catalog <g>

Commercial Grade.

"Universal units designed to match any tubes within the rated output
power, to line or voice coil."

Output impedance 500, 200, 50, 16, 8, 5, 3, 1.5 ohms.

Primary impedance 3,000, 5,000, 6,000, 8,000, 10,000, 14,000 ohms,
center tapped.

CVP-4 audio watts = 125.

2264. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 00:39:08 UTC
From: hmmm <sp@m.not>
Message-ID: <3E7E53A6.D79C961C@m.not>
Source record: 36667
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Isn't a chopper amplifier what a woodsman uses to cut wood faster with his axe?

Don Lancaster wrote:

> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com

2265. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 00:49:34 UTC
From: John Larkin <John.Larkin>
Message-ID: <mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com>
Source record: 36668
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
wrote:

>Tarmo Tammaru wrote:
>>
>> You realize that nobody under the age of 60 knows what a chopper amplifier
>> is?
>>
>> Tam/WB2TT
>

This is just a special case of nobody under 50 knowing anything at
all.

John

2266. FS: new 200 pf doorknob capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 00:55:41 UTC
From: k9sqg@aol.com
Message-ID: <20030323195541.21120.00000177@mb-bj.aol.com>
Source record: 36669

Have some brand new, Centralab transmitting capacitors for sale. Model is 857, and are rated at 200 mmf at 7.5kvdc, N750. Can mix and match these values for coupling capacitors, padders for loading capacitors, or what have you. $5 each plus Priority Mail shipping. I cannot ship outside continental US.

73s,

Evan

2267. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 01:19:40 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <e8ns7vsnlbqbmubtnrvhdo0imp06ne3abd@4ax.com>
Source record: 36670
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 16:49:34 -0800, John Larkin <John.Larkin> wrote:

>On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
>wrote:
>
>>Tarmo Tammaru wrote:
>>>
>>> You realize that nobody under the age of 60 knows what a chopper amplifier
>>> is?
>>>
>>> Tam/WB2TT
>>
>
>This is just a special case of nobody under 50 knowing anything at
>all.
>
>John
>

Ain't that the truth!

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

2268. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 02:06:12 UTC
From: "Keith R. Williams" <krw@attglobal.net>
Message-ID: <MPG.18e8321dd64d58fe98a195@enews.newsguy.com>
Source record: 36671
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com>, John
Larkin <John.Larkin> says...
> On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> wrote:
>
> >Tarmo Tammaru wrote:
> >>
> >> You realize that nobody under the age of 60 knows what a chopper amplifier
> >> is?
> >>
> >> Tam/WB2TT
> >>
>
> This is just a special case of nobody under 50 knowing anything at
> all.

Whew! I just crossed the evil "Barrier of Know-Nothing". I
prefer to say I'm 32 though. I'm prematurely grey though (ok
silver, dammit!) ;-)

--
Keith

2269. Re: Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 02:45:33 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E7E7662.5080202@invalid.invalid>
Source record: 36672

Simon wrote:
> You could run it on Wine

True, though that doesn't solve the issue of embedding the results in my own application.

What I ended up doing...

is to use the LWP::UserAgent module to pass the appropriate parameters to the online calculator on the FCC website. I then parse the resulting value out of the returned HTML page. Rather slow (and I kinda expect to get an email from the FCC webmaster tomorrow asking why I'm harassing his server<grin>) but it does work.

I'm also caching the results in a MySQL database table. When the next station is looked up, if the same ERP/HAAT/distance values are already in the local database then there's no need to run the calculator on the web.

Not 100% sure the caching is working yet.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2270. Re: Coverage prediction algorithm?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 05:41:21 UTC
From: hello_nasty@hotmail.com
Message-ID: <7578ddcf.0303232141.4a3dd938@posting.google.com>
Source record: 36673

Doug Smith W9WI <w9wi@invalid.invalid> wrote in message
news:<3E7D06B0.4070003@invalid.invalid>...
> I'm wondering if anyone has any pointers to code for predicting the
> field strength of a VHF/UHF signal given power, antenna height,
> distance, and frequency? Especially in Perl or BASIC but I can deal
> with C and Pascal.
>
> I've got the FCC's (USA) "Curves" program but it's got a double whammy -
> it's Fortran (which I more or less knew 30 years ago...) and it's nearly
> illegible in many places. (it's a scan of a printout...)
>
> Extreme accuracy is not important. Basically I'm wanting to pull data
> on a station from the FCC database and make a good guess as to whether
> it's audible at a given location.

Here's a Wireless Network Link Analysis in a Perl CGI:
http://my.athenet.net/~multiplx/cgi-bin/wireless.main.cgi

Link and Perl source code is linked from http://www.qsl.net/n9zia

2271. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 07:52:44 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <t7et7vsogh1osqpopkb4740ag7q7vlv0du@4ax.com>
Source record: 36674
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
wrote:

>Tarmo Tammaru wrote:
>>
>> You realize that nobody under the age of 60 knows what a chopper amplifier
>> is?
>>
You should be able to find lots of them in manufacturing and the
chemical industry as young as 40. Probably not a lot younger than
that. Although they do make it a lot easier to amplify a signal from
a thermocouple. Now days you do it with solid state switches.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>> Tam/WB2TT
>
>A Chevvy V8 on a Harley, obviously.

2272. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 08:30:34 UTC
From: The Real Andy <ihatespam@freemail.com.au>
Message-ID: <3e7ec144$0$16254$afc38c87@news.optusnet.com.au>
Source record: 36675
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"John Larkin" <John.Larkin> wrote in message
news:mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com...
> On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> wrote:
>
> >Tarmo Tammaru wrote:
> >>
> >> You realize that nobody under the age of 60 knows what a chopper
amplifier
> >> is?
> >>
> >> Tam/WB2TT
> >
>
> This is just a special case of nobody under 50 knowing anything at
> all.
>
Thats crap, i'm under 50 an i no that beer is healthy for ya....There, i no
somethink....

2273. Re: WANTED: 18v 20 amp transformers for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 12:53:01 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <QP-cneahEOwwYuOjXTWcrg@comcast.com>
Source record: 36676

http://www.fairradio.com/lowvol.htm

The 20V unit might be usable.

Tom
N3IJ

"Tracy Fort" <tracy.fort@gimail.af.mil> wrote in message
news:sraf7vs7kuk32qbodc15t2s05613qb9dtd@4ax.com...
> 20 to 25 amp....18volt output
>
> 120vac in 18v out..
>
> anybody have one that they would be willing to sale at a decent price?
>
> Trying to build a ham radio power supply..
>
> please email me...
>
> Thanks,
>
> Tracy
> Tracy Fort
>
> KE4ODD
>
> tracy.fort@gimail.af<NOSPAM>.mil
>
> remove <NOSPAM> for repliess

2274. antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 15:22:10 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <CoFfa.185$SN5.150144166@newssvr12.news.prodigy.com>
Source record: 36677

while doing research on mobile antennas
for my automobile, the thought has occurred
to me that it was theoritcally possible to tune
an antenna using a permeability tuned coil
much like using a permeability tuned vfo.
since i have not seen such an antenna,
the question is why is it not done? to expensive?
not power handling ability? or what???

larry
kd5foy

--
Fragen Sie nicht was Ihre Kumputer tun koennen,
aber fragen Sie was Sie fur Ihre Kumputer koennen.

2275. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 15:38:39 UTC
From: Ham <sp@m.not>
Message-ID: <3E7F2681.9A2B580D@m.not>
Source record: 36678
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

My recollection is that HP made an expensive and very sensitive meter that used a nice mechanical chopper in it. I think I remember having one on my bench for a few weeks in the early 1960s.

The Real Andy wrote:

> "John Larkin" <John.Larkin> wrote in message
> news:mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com...
> > On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> > wrote:
> >
> > >Tarmo Tammaru wrote:
> > >>
> > >> You realize that nobody under the age of 60 knows what a chopper
> amplifier
> > >> is?
> > >>
> > >> Tam/WB2TT
> > >

2276. crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 16:23:14 UTC
From: bertsch.3@osu.edu
Message-ID: <b5nbdi$e5$1@layla.net.ohio-state.edu>
Source record: 36680

What's a good low-hassle source for single quanity crystals?

-Steve K8ZG

2277. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 16:25:57 UTC
From: troglodite@aol.com
Message-ID: <20030324112557.27730.00000566@mb-cg.aol.com>
Source record: 36681

>
>My recollection is that HP made an expensive and very sensitive meter that
>used
>a nice mechanical chopper in it. I think I remember having one on my bench
>for
>a few weeks in the early 1960s.
>

That was the model 412A. It used a rotating disc driven by a clock motor, some incandescant lamps, and some cadmium sulphide cells. Worked fine if adjusted properly. I still have one and still use it.

2278. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 16:35:17 UTC
From: Ham <sp@m.not>
Message-ID: <3E7F33C7.CDD99165@m.not>
Source record: 36682

YES, you're bringing back memories. I'd love to have on these days.

I still remember the shock when the meter movement was damaged and had to be replaced and the cost was, in the early 1960s nearly $200! I sure loved that beautiful big mirrored scale though.

Troglodite wrote:

> >
> >My recollection is that HP made an expensive and very sensitive meter that
> >used
> >a nice mechanical chopper in it. I think I remember having one on my bench
> >for
> >a few weeks in the early 1960s.
> >
>
> That was the model 412A. It used a rotating disc driven by a clock motor, some
> incandescant lamps, and some cadmium sulphide cells. Worked fine if adjusted
> properly. I still have one and still use it.

2279. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 16:44:34 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E7F35C9.EF586FB4@earthlink.net>
Source record: 36683
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Watson Ammonium Chloride Name wrote:
>
> In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > Tarmo Tammaru wrote:
> > >
> > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > is?
> > >
> > > Tam/WB2TT
> >
> > A Chevvy V8 on a Harley, obviously.
>
> "You call that a chopper? THIS is a chopper!"
> http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> Thanks, google.

My dog was named Chopper. He was a Rat Terrier we had for about 10
years. Strong willed, stubborn, and quite a clown. Kind of like a
Usenet troll or two that I've seen. :)

--

Michael A. Terrell
Central Florida

2280. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 16:57:09 UTC
From: Thomas <zak@spam.invalid>
Message-ID: <b5ndd5ksk1@news1.tilbu1.nb.home.nl>
Source record: 36684
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Ham wrote:
> My recollection is that HP made an expensive and very sensitive meter that used
> a nice mechanical chopper in it. I think I remember having one on my bench for
> a few weeks in the early 1960s.

I owned something (fluke?) with an analog meter, and a current/volts setting.

It used neon lamps to do the chopping. Someone stole all the transistors, and all that was left were sockets. I measured and tried surplus transistors until it worked, and it did. The needle wasn't entirely stable (noise?) but sensitivity seemed to be okay, it could measure a permanent magnet moving fairly slowly across a single wire quite well.

Later I gave it away.

Thomas

2281. FS: BA/HB parts de W7ZFB

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 17:26:14 UTC
From: msix@plato.nmia.com
Message-ID: <WcHfa.1302$U5.719@fe01.atl2.webusenet.com>
Source record: 36685

Latest list of stuff asof 3/12/03
Kinda long but bear with me...

All used unless stated NOS/NIB
*** All prices are POSTPAID lower 48 ***

---Tank coils---
Heavy-duty Air-Dux 195-1 PI NET coil
Plated strap 10M coil, 10T 4 TPI and 9T 6 TPI of No 10 wire
Total L 20 uH, 6 factory installed taps
Easy KW plus, looks unused $62

---AF xfmrs---
NIB Triad A-35A 10K plate to 90KCT single or P-P grids.
Unused. Allied catalog says freq response 50 to 10K.
2 x 2 x 2.5H inches. $32

2 each NOS Stancor WF-30 multi-Z interstage AF xfmrs.
Hermetically sealed. 1.5 x 1.5 x 2H inches. $13 ea

---coax relays---

These are Danbury-Knudsen or FXR, silver-plated, flat to 600MHz+,
100W+, BNC coax jacks. See old Allied/Newark catalogs.

FXR, NOS, SPDT, 115VAC coil, 2 x 1.5 x 1 inches, $16

D-K, used, SPDT, 18-24VDC coil, 2 x 1.5 x 1 inches, $16

D-K, used, SPDT, 12VDC coil, 2 x 1.5 x 1 inches $16

D-K, used, SP6T, 12VDC coils, 3 x 3 x 2 inches, $25

Motorola, NOS, SPDT, 6VDC coil, 3 x 2.5 x 1.5,
Ant and Rx BNC, Tx solder terminal, $12

---tubes and sockets---
Eimac SK-610 4X/4CX family socket with mounting tabs. $12 ea
Good low-mileage 4CX250B with above socket. $27

Set of 10 real stetite sockets with snap rings
6 4-pin Amphenol, snap ring mount
4 octal Amphenol, snap ring mount
Some new, some used $14 all

---solid state tube-replacement rectifiers---
2 each NIB Sarkes-Tarzian S5251/1N2389, 1600 PRV, 600ma
OK for all except 5R4
$12 ea

1 each Semicon.Inc 1N1239, 2800 PRV, 500ma
OK for all including 5R4
$12 ea

---filters---
Stock Drake 4-line C-F Networks xtal filter model 5645-2.4L
with carrier xtal 5644.999KHz. $35

Kokusai 455KHz 2.1KHz xtal filter model 455ZU-01H
Hermetically sealed. $17

---xtals---
38.1MHz xtal for Drake 4-line. $6

1 lot of 5 HC-6 xtals. 3.4, 10.4, 17.4, 23.4, 24.4MHz
$16

1 lot of 4 HC-6 xtals. 1.545, 4.545, 15.545, 22.545MHz
$14

73 - John W7ZFB reply to: msix@nmia.com
n

2282. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 17:57:22 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0303240957.25d0c0b4@posting.google.com>
Source record: 36686

"Mark J. Dulcey" <mark@buttery.org> wrote in message
news:<pan.2003.03.21.05.27.41.638535@buttery.org>...

You mean to tell me that for $25 I don't get a rig that's as rock
solid as the FT817? Man, what a gyp.

Back to reality...I have both versions, they are a lot of fun to
build, more fun to operate, and LOADS of fun to run from the trail or
campsite.

7040 or thereabouts ALWAYS seems to have someone standing by ready to
QSO.

73

Face it, anything else that gives you this much fun for $25, is
probably illegal and unhealthy.

> The Rock-Mite is a very limited function rig, because it's bound to just
> one frequency. (Well, actually two that are close together.) On the other
> hand, its receiver performance is considerably better than most simple
> direct conversion designs, because of the front-end selectivity added by
> the crystal. (One of the two crystals in the Rock-Mite is used as a simple
> filter; the other is used in the master oscillator.)
>
> It's a toy, not a general purpose radio. But it's a good toy. If you enjoy
> the game of making contacts with simple equipment, it's a lot of fun. If
> you like your contacts to come easily, it's not the radio for you.

2283. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 18:00:39 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <0cudneB4gfZ32uKjXTWcqw@cnmnetwork.com>
Source record: 36687

The core loss would be excessive. That's why all RF power inductors have air cores.

Certain materials have sufficiently low loss, but they tend to get expensive.

2284. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 18:21:17 UTC
From: John Larkin <jjlarkin@highSNIPlandTHIStechPLEASEnology.com>
Message-ID: <9miu7v0hpu21r2pcbd7n5u0hme5rthsafg@4ax.com>
Source record: 36688
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Mon, 24 Mar 2003 15:38:39 GMT, Ham <sp@m.not> wrote:

>My recollection is that HP made an expensive and very sensitive meter that used
>a nice mechanical chopper in it. I think I remember having one on my bench for
>a few weeks in the early 1960s.
>

Maybe it was a 412A; they were sold in the mid-60s. It was a DC VOM
with voltage ranges from 1000 V to 1 mV, and essentially zero drift.
It used CdSe photocells as both the input chopper and the final
synchronous demodulator, with a tube AC amp between. It used a
synchronous (clock-type) motor, a light bulb, and a chopper disk to
drive the photocells. Very nice instrument.

The early Fluke and HP differential voltmeters used mechanical,
vibrator-type choppers. Choppers were widely used in servo systems.

Lots of people make CMOS IC chopper opamps today. Some have drifts
measured in nanovolts per degree C.

John

2285. Re: crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 18:37:05 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5nj8g$sv2$1@titan.btinternet.com>
Source record: 36690

<bertsch.3@osu.edu> wrote in message
news:b5nbdi$e5$1@layla.net.ohio-state.edu...
>
> What's a good low-hassle source for single quanity crystals?
>

QSL in the UK.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2286. Vintage Coils FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 18:44:07 UTC
From: G4BXD@qsl.net
Message-ID: <3e7f397a.1985079@news.compuserve.com>
Source record: 36689

Vintage Coils FS

selection of coils by 'Raymart.
ribberd formers, various windings
11 x 6 pin types with extra regen winding
6 x 4 pin types ae or osc usage
plus 1 x 6 pin base, 2 x 4 pin base, 1 x 5 pin base(4 pin coil fits
though)
1 x vintage on/off switch
2 x variable caps,high grade, probably 250pf +-
plus info sheet.

£20

2287. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 18:47:17 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <fcku7vc3qffgleu6lo2lsj2gf7a6r85bvs@4ax.com>
Source record: 36691

On Mon, 24 Mar 2003 10:00:39 -0800, "Bob" <balbert@cnmnetwork.com>
wrote:

Better posted in rec.radio.amateur.antenna

|The core loss would be excessive. That's why all RF power inductors have
|air cores.

Nonsense. The Q of powdered-iron toroids using a mix appropriate to
the frequency can easily exceed that of carelessly designed air core
inductors.

|
|Certain materials have sufficiently low loss, but they tend to get
|expensive.

Which is it: the loss is excessive or they're too expensive?

2288. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 19:44:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7uo117lp6le07@corp.supernews.com>
Source record: 36692

There was very recently some discussion about permeability tuned
inductors on either this group or rraa, I don't recall which. From that,
I gathered that no one has seen a powdered iron rod except for the cores
used for small variable inductors. Certainly a powdered iron core of a
size useful for tuning a mobile antenna for transmitting purposes would
be very expensive if you could find one at all (which I doubt you could do).

The recent thread also showed that quite a number of people don't know
the difference between powdered iron and ferrite (and some don't seem to
be interested in learning), and think their ferrite rods are powdered iron.

One problem with using powdered iron for tuning a solenoidal inductor
(if you could find the material in rod form to do it) is that you
wouldn't have a great deal of tuning range. The permeability of powdered
irons having low loss at HF is quite low, and the large air gap in the
magnetic path would make the effective permeability lower yet.

A high frequency ferrite such as Fair-Rite 60 series might be practical.
But you'd still need a large inductor to get good Q, and then need a
very large core to be effective. It would be expensive.

Roy Lewallen, W7EL

Wes Stewart wrote:
> On Mon, 24 Mar 2003 10:00:39 -0800, "Bob" <balbert@cnmnetwork.com>
> wrote:
>
>
> Better posted in rec.radio.amateur.antenna
>
> |The core loss would be excessive. That's why all RF power inductors have
> |air cores.
>
> Nonsense. The Q of powdered-iron toroids using a mix appropriate to
> the frequency can easily exceed that of carelessly designed air core
> inductors.
>
> |
> |Certain materials have sufficiently low loss, but they tend to get
> |expensive.
>
> Which is it: the loss is excessive or they're too expensive?

2289. Re: Tayloe Mixer and "Gray Code" noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 20:13:40 UTC
From: Jan Wagner <jwagner@kosh.hut.fi>
Message-ID: <Pine.OSF.4.50.03032421484l0.307910-100000@kosh.hut.fi>
Source record: 36693

Hi,

On Sun, 23 Mar 2003, Richard Hosking wrote:
> I am in the process of designing a general coverage SSB TX/RX based on this
> mixer using a quad bus switch
> -either FST3125 or FST3253
> I have been working with Rod Green VK6KRG
<snip>
> If a "Gray Code" sequence is used such as 00 01 11 10 then this effect
> should not happen.
>
> Has anyone got any ideas? Is this a real problem?

This is partly on-topic, partly off-topic, but...

http://www.arrl.org/tis/info/pdf/030304qex020.pdf
(btw, also see www.flex-radio.com)

which is a paper by Gerald Youngblood about the hardware part of a
software defined radio, a balanced 2 x dual-mux Tayloe transciever.
Maybe you've seen it already?
It seems the author didn't realize it, but his setup uses Gray code for
the dual mux (PI5V331 which is quite similar in specs to the FST3253) -
and in the paper he also presents some measurement on how well it
performs, IIRC. Maybe you'll find it useful as a reference...

good luck,

73,
- jfw

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2290. ptfe coax question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 21:21:45 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1048540990.519010@auth2.dns.griffin.net.uk>
Source record: 36694

hi there..

can anyone tell me the max power rating in watts (continious) at 2m thin 50r (like rg174) ptfe min coax will take safely. I am making a wilkinson combiner and need to connect it to the outputs of the amp modules, and would like to use it rather than rg213 etc.each length will only be 150mm (6in) max..
the amp is made of 2x300w modules..

thanks simon G0ZEN...

p.s. combiner is using microwave copper sheaved 75r semirigid..

2291. Re: ptfe coax question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-24 22:16:44 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e7f83b0$0$118$edfadb0f@dtext02.news.tele.dk>
Source record: 36695

Hello

> can anyone tell me the max power rating in watts (continious) at 2m thin
50r
> (like rg174) ptfe min coax will take safely. I am making a wilkinson

The RG174 (standard) is rated 95W at 144 MHz

The RG316 (PTFE) is rated 240W at 144 MHz

Regards Max

2292. 288MHz coax (heliax) notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 00:09:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3e7f98e3.87134458@news.online.no>
Source record: 36696

Got some requests for building a very sharp, tunable notchfilter with
deep notch depth, a sketch is now shown at
http://home.online.no/~la8ak/7a.htm

the site is not complete in all respects, but I've been working on it
for a month and put 560 jpg and gif files at a total size of 12MB

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2293. Re: Variable cap value

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 00:20:30 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7FA0CE.8010803@bellsouth.net>
Source record: 36597

John Bartley wrote:
> scharkalvin wrote:
>
>>
>>
>> Hmmm, I paid a little more for my GR bridge (not the same model, I got
>> the one with the Omni-null two dial job).
>> But I think my Heathkit IB5281 is actually easier to use!
>>
>>
>
> Hi Ken,
>
> You might have a 1650??? They're newer, portable, more compact, and can
> be carried by one person. The 650 doesn't read as low on inductance
> IIRC, and may or may not have the 120vac power built in. I think I paid
> $15.00 for mine on Ebay, got it home, and promptly euchered (sp?) the
> null meter with too much DC. Now I use a scope for the null.
>
> cheers
>

Yup it's a 1650A. The null meter works fine, don't know how you blew
yours up.
I only run mine off the internal batteries. I have a hard time
measuring L with it,
I can find several null points between the two dials, and you have to
have the range
switch in the right ballpark to start with. I don't know how low in
inductance it goes,
but it measures large filter chokes (several hundred henrys) ok.

2294. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 00:27:23 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7FA26B.2030601@bellsouth.net>
Source record: 36598

I'm tempted to buy his pre-programed pic controller to install in a home brew rig of my
own design, or to just use it as a keyer. I have some NE602's, wonder if they will sub for the '612.
BTW I heard that 3.579mhz (color burst freq) is used as a QRP calling freq on 80, is this true? (cause
I have a few of those rocks). Any opinions on which band is better 40 or 20 (or 80)?

> "Mark J. Dulcey" <mark@buttery.org> wrote in message news:<pan.2003.03.21.05.27.41.638535@buttery.org>...
>
> You mean to tell me that for $25 I don't get a rig that's as rock
> solid as the FT817? Man, what a gyp.
>
> Back to reality...I have both versions, they are a lot of fun to
> build, more fun to operate, and LOADS of fun to run from the trail or
> campsite.
>
> 7040 or thereabouts ALWAYS seems to have someone standing by ready to
> QSO.
>
> 73
>
> Face it, anything else that gives you this much fun for $25, is
> probably illegal and unhealthy.
>
>
>
>
>>The Rock-Mite is a very limited function rig, because it's bound to just
>>one frequency. (Well, actually two that are close together.) On the other
>>hand, its receiver performance is considerably better than most simple
>>direct conversion designs, because of the front-end selectivity added by
>>the crystal. (One of the two crystals in the Rock-Mite is used as a simple
>>filter; the other is used in the master oscillator.)
>>
>>It's a toy, not a general purpose radio. But it's a good toy. If you enjoy
>>the game of making contacts with simple equipment, it's a lot of fun. If
>>you like your contacts to come easily, it's not the radio for you.
>

2295. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 00:33:31 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <vtNfa.27618$S%3.1613647@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36599

Core losses would be excessive... that's why air coils are used in "match
boxes" designed for that very purpose.

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:CoFfa.185$SN5.150144166@newssvr12.news.prodigy.com...
> while doing research on mobile antennas
> for my automobile, the thought has occurred
> to me that it was theoritcally possible to tune
> an antenna using a permeability tuned coil
> much like using a permeability tuned vfo.
> since i have not seen such an antenna,
> the question is why is it not done? to expensive?
> not power handling ability? or what???
>
> larry
> kd5foy
>
>
>
> --
> Fragen Sie nicht was Ihre Kumputer tun koennen,
> aber fragen Sie was Sie fur Ihre Kumputer koennen.
>
>

2296. Re: ptfe coax question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 00:35:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <qvNfa.27620$S%3.1613839@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36600

Should be no problem for a short piece of RG174.
I have had 200W going through a 5' piece of that coax at around 30MHz with
slight heating...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1048540990.519010@auth2.dns.griffin.net.uk...
> hi there..
>
> can anyone tell me the max power rating in watts (continious) at 2m thin
50r
> (like rg174) ptfe min coax will take safely. I am making a wilkinson
> combiner and need to connect it to the outputs of the amp modules, and
would
> like to use it rather than rg213 etc.each length will only be 150mm (6in)
> max..
> the amp is made of 2x300w modules..
>
> thanks simon G0ZEN...
>
> p.s. combiner is using microwave copper sheaved 75r semirigid..
>
>

2297. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 01:35:13 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v7vcivs8tsh95c@corp.supernews.com>
Source record: 36601

The only difference between a 602 and a 612 is that 602's are 100% tested (and thus a little more expensive). I don't know why one would choose Dave's chip over any of the other keyer chips if you were interested in a keyer. And yes, 3.579 is a popular QRP frequency.

What band is best is one of those questions where the answer is "it depends". But if you are rockbound with low power, I'd choose 14.060. 80 is tough on QRP, 40 has plenty of QRM so a fixed frequency is a real challenge. 20 is QRP friendly, and you can always kick up a QSO on 060. BUT, if your operation is mostly late at night, maybe 40 is a better choice. 20 shuts down, especially in the winter, and as the spots fade, it will shut down earlier. Still, assuming the wa2 means you are a right-coaster, 40 could be a real challenge.

..

"scharkalvin" <wa2mze@bellsouth.net> wrote in message news:3E7FA26B.2030601@bellsouth.net...
> I'm tempted to buy his pre-programed pic controller to install in a home
> brew rig of my
> own design, or to just use it as a keyer. I have some NE602's, wonder
> if they will sub for the '612.
> BTW I heard that 3.579mhz (color burst freq) is used as a QRP calling
> freq on 80, is this true? (cause
> I have a few of those rocks). Any opinions on which band is better 40
> or 20 (or 80)?
>
>
> > "Mark J. Dulcey" <mark@buttery.org> wrote in message news:<pan.2003.03.21.05.27.41.638535@buttery.org>...
> > > You mean to tell me that for $25 I don't get a rig that's as rock
> > > solid as the FT817? Man, what a gyp.
> > >
> > > Back to reality...I have both versions, they are a lot of fun to
> > > build, more fun to operate, and LOADS of fun to run from the trail or
> > > campsite.
> > >
> > > 7040 or thereabouts ALWAYS seems to have someone standing by ready to
> > > QSO.
> > >
> > > 73
> > >
> > > Face it, anything else that gives you this much fun for $25, is
> > > probably illegal and unhealthy.

> >
> >
> >
> >
> >>The Rock-Mite is a very limited function rig, because it's bound to just
> >>one frequency. (Well, actually two that are close together.) On the
other
> >>hand, its receiver performance is considerably better than most simple
> >>direct conversion designs, because of the front-end selectivity added by
> >>the crystal. (One of the two crystals in the Rock-Mite is used as a
simple
> >>filter; the other is used in the master oscillator.)
> >>
> >>It's a toy, not a general purpose radio. But it's a good toy. If you
enjoy
> >>the game of making contacts with simple equipment, it's a lot of fun. If
> >>you like your contacts to come easily, it's not the radio for you.
> >
>
>
>

2298. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 02:36:44 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <61fv7vohvcctvc06lkqlou00tm153503hj@4ax.com>
Source record: 36603

In <vtNfa.27618$S%3.1613647@bgtnsc04-news.ops.worldnet.att.net>,
"Brian Griffey" <briangriffey@worldnet.att.net> wrote:

>Core losses would be excessive... that's why air coils are used in "match
>boxes" designed for that very purpose.

There you go again Brian, trying to sound knowledgable about things of
which you have little understanding.....

Core loss for any given material increases with both the frequency and
the AC flux densitiy (in this case, RF power). Some iron-powder core
mixes have a very low core loss even at high frequency, and most are
available as threaded cores. Also, permeability is usually sacrificed
for low core losses at high frequencies, but that shouldn't be much of
a problem since you just want the core to tune the antenna and not
necessarily to load it, and you don't need much u at high frequencies
anyway.

I would recommend you get some literature from here:

www.micrometals.com

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2299. FA FA FA FINGER STOCK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 02:39:58 UTC
From: kf4toh@aol.com
Message-ID: <20030324213958.27985.00000345@mb-mp.aol.com>
Source record: 36604

ABOUT 40" OF FINGER STOCK

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014290059

2300. FA FA FA HOMEBREW STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 02:44:15 UTC
From: kf4toh@aol.com
Message-ID: <20030324214415.27985.00000346@mb-mp.aol.com>
Source record: 36605

HV AND FILAMENT MARKS WITH LIGHT

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014292094

LOTS OF CAPS

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014295544

3 BIG TORROID CORES

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014296616

2301. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 02:50:43 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E7FC403.70603@bellsouth.net>
Source record: 36606

xpyttl wrote:
> The only difference between a 602 and a 612 is that 602's are 100% tested
> (and thus a little more expensive). I don't know why one would choose
> Dave's chip over any of the other keyer chips if you were interested in a
> keyer. And yes, 3.579 is a popular QRP frequency.
>
Well his description of the program in that chip sounded good.
Amazing how much you can stuff into an 8 pin pic.

> What band is best is one of those questions where the answer is "it
> depends". But if you are rockbound with low power, I'd choose 14.060. 80
> is tough on QRP, 40 has plenty of QRM so a fixed frequency is a real
> challenge. 20 is QRP friendly, and you can always kick up a QSO on 060.
> BUT, if your operation is mostly late at night, maybe 40 is a better choice.
> 20 shuts down, especially in the winter, and as the spots fade, it will shut
> down earlier. Still, assuming the wa2 means you are a right-coaster, 40
> could be a real challenge.
>

East coast yes, but SOUTH not north. I'm in the FT Lauderdale area.

2302. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 03:29:32 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E7FCD1E.6E95A956@silverstar.com>
Source record: 36607
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Now I had thought it to be a '32 Ford V8 in an Indian!

Don Lancaster wrote:

> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com

2303. FA Repeater Controller Relisted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 03:36:42 UTC
From: rnelson@fartmel.net
Message-ID: <tljv7vkckfat9k45o0h8s70obhrfi4fisf@4ax.com>
Source record: 36602

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3013448147&rd=1

2304. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 03:38:14 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18e96f03b4e6033498a106@news.inreach.net>
Source record: 36679
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.

"You call that a chopper? THIS is a chopper!"
http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
Thanks, google.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

2305. Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 04:48:40 UTC
From: Jeremy Becnel <desfox_at_sydcom.net>
Message-ID: <3e7fe00d$1_5@corp.newsgroups.com>
Source record: 36608

Guys and gals,

Does anyone know where I can get a 20 henry, 500 ohm filter choke? Im wanting to start building the first set in the "Radio For The Millions" book. I can get everything else either locally or online, but not a friggin 20h 500 ohm filter choke.

Anything that could be easily substituted for it?

Jeremy
KC5TEK

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2306. Re: ptfe coax question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 06:25:18 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e7ff632$0$137$edfadb0f@dtext02.news.tele.dk>
Source record: 36611

Hello Brian

> Should be no problem for a short piece of RG174.
> I have had 200W going through a 5' piece of that coax at around 30MHz with
> slight heating...

It is no problem with 200 W at 30MHz, but at 144MHz I am shure it is.

Regards Max

2307. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 06:42:17 UTC
From: "Dave M." <gadget@frontiernet.net>
Message-ID: <dTSfa.244$c71.76@news02.roc.ny.frontiernet.net>
Source record: 36612
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I'm 49 and I know of them. In instrumentation amplifiers, they are used to modulate the input voltage after which the modulated signal is detected as a D.C. voltage with an offset determined by the precision of the match of the two choppers. At the time, the precision D.C. instrumentation amplifier did not exist.

Dave M.

Don Lancaster <don@tinaja.com> wrote in message news:3E7E517D.2BB1B17A@tinaja.com...
> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com
>

2308. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 07:26:11 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E8004CF.1BFD7D15@earthlink.net>
Source record: 36613
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Watson Ammonium Chloride Name wrote:
>
> In article <3E7F35C9.EF586FB4@earthlink.net>, mike.terrell@earthlink.net
> mentioned...
> > Watson Ammonium Chloride Name wrote:
> > >
> > > In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > > > Tarmo Tammaru wrote:
> > > > >
> > > > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > > > is?
> > > > >
> > > > > Tam/WB2TT
> > > >
> > > > A Chevvy V8 on a Harley, obviously.
> > >
> > > "You call that a chopper? THIS is a chopper!"
> > > http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> > > Thanks, google.
> >
> >
> > My dog was named Chopper. He was a Rat Terrier we had for about 10
> > years. Strong willed, stubborn, and quite a clown. Kind of like a
> > Usenet troll or two that I've seen. :)
>
> "Of all the dog breeds, the terrier is the best. Of all the terriers,
> the scotty is the best." I dunno where I read that, but we had a runt
> scotty when I was a kid. Good dawg.
>
> --

Good, but strange. I was on a service call one day, and this little
old lady answered the door. She told me she had a dog, but he wouldn't
bother me, and would hide under the couch, till I left. It was a toy
terrier that looked exactly like my 40 pound terrier at home, but it
could sit in the palm of your hand. i got busy on the TV, and heard the
dog's toenails on the hard floor and looked up to see it had brought me
one of its toys and laid it by where I was working. The lady was
shocked. She went on and on about how it had never taken to a stranger,
and never let anyone near any of its chew toys. I smiled and told her I
had one of my own, and it probably smelled the scent and knew it was OK.

I miss that old dog. He started having strokes and the vet couldn't do anything, so we had no choice but to let him be put to sleep. I doubt I'll ever see another one like him again. He wasn't afraid of the biggest dogs in the neighborhood, but would lay by the couch and watch a baby sleep and come get someone if it moved. He was terrified to climb stairs, but would jump up on things a lot higher. If I carried him down into the basement he would sleep by my feet while I worked all day at my workbench. The strangest thing was when he was a pup a cat attacked him, by slapping him with a paw, and those nails extended. Instead of jumping it like a dog would normally do, he slapped it, and it rolled about 20 feet across the yard and never came back. He was a strange, but lovable old friend.

--

Michael A. Terrell
Central Florida

2309. Minimount Wainwright

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 09:46:30 UTC
From: Alistair McEwan <alistair@robots.ox.ac.uk>
Message-ID: <Pine.GSO.3.96.1030325092030.7643A-100000@vaux>
Source record: 36614
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Hi,

Various application notes have warned me not to use sockets for high speed analogue ICs, but alternatively use a Minimount system: http://www.rdi-wainwright.com/

I'd like to hear from anyone who has had experience with these as there is little information on thier website or in the newsgroup archives. My application is testing 10 of my own custom 68pin PLCC analogue chips at clock frequencies up to 300MHz, with rise/fall times better than 1ns. I'm not too keen on soldering 10 chips on and off my pcb.

How are the minimount systems removed from the PCB? Is it easy to remove the excess glue so that another minimount can be placed? Is there any soldering associated with minimount replacement and is it much easier than removing a 68 pin plcc?

How much extra room on a PCB does the minimount take up and what typical inductance does each pin see? Is there really significant inductance saving over a surface mount socket?

Has anyone tested the difference between the 0.8mm and 1.5/2mm minimounts? Is there a significant frequency improvement with the thinner boards and how much more difficult are they to work with?

thanks,

Alistair McEwan

2310. Kenwood TR-2300 VHF TRcv FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 10:07:17 UTC
From: G4BXD@qsl.net
Message-ID: <3e8024ab.2930256@news.compuserve.com>
Source record: 36615

Kenwood TR-2300 VHF TRcv FS

144 to 146, 25 khz channels
1 W FM, with mic and handbook/circuit etc.
with nicads. working.

(no case, strap or charger[12v].)

40

2311. Re: Minimount Wainwright

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 11:18:14 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5pdtlitj1@hercules.btinternet.com>
Source record: 36616
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

"Alistair McEwan" <alistair@robots.ox.ac.uk> wrote in message
news:Pine.GSO.3.96.1030325092030.7643A-100000@vaux...
> Hi,
>
> Various application notes have warned me not to use sockets for high speed
> analogue ICs, but alternatively use a Minimount system:
> http://www.rdi-wainwright.com/
>
> I'd like to hear from anyone who has had experience with these as there is
> little information on thier website or in the newsgroup archives. My
> application is testing 10 of my own custom 68pin PLCC analogue chips at
> clock frequencies up to 300MHz, with rise/fall times better than 1ns. I'm
> not too keen on soldering 10 chips on and off my pcb.

They used to use these sometimes for RF prototyping where I worked, once. I
liberated a couple, but never used them.

I needed something like them once that wasn't in their range, designed my
own and had a few made. I sold the ones I didn't need - paid all my costs.

>
> How are the minimount systems removed from the PCB? Is it easy to remove
> the excess glue so that another minimount can be placed? Is there any
> soldering associated with minimount replacement and is it much easier than
> removing a 68 pin plcc?

The adhesive seems to be similar to double-sided tape, and should be easy to
remove. Ease of replacement depends on how the Minimount is connected to the
rest of the circuitry.

>
> How much extra room on a PCB does the minimount take up and what typical
> inductance does each pin see? Is there really significant inductance
> saving over a surface mount socket?

There is probably a lot more stray inductance and capacitance, because of
the additional track length added to the leads.

>
> Has anyone tested the difference between the 0.8mm and 1.5/2mm minimounts?
> Is there a significant frequency improvement with the thinner boards
> and how much more difficult are they to work with?

The mounts I had made were 0.8mm thick. I had no problems with them.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2312. new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 14:20:01 UTC
From: Brian Lodahl <lodahl@kom.auc.dk>
Message-ID: <b5ponb$pa3$1@sunsite.dk>
Source record: 36617
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Repost from like a month ago, but here we go again....
[!! crossposted in
rec.radio.amateur.equipment, rec.radio.amateur.homebrew,
rec.radio.amateur.misc]

Hi,

I'm thinking about changing my NiCd cells in the battery for my Yaesu FT-50 Handheld to NiMh type instead. Mainly for 2 reasons:
1) larger capacity and 2) the old ones cannot hold their capacity for longer periods of time anymore.

The battery is of the type FNB-41, 9.6 Volts and 600 mAh. I don't know about the number of cells, their size or voltage, but i bet it is 8x1.2 Volts.....

Does anyone have any experience in opening the battery case for this particular type of battery? I have an idea about the casing being welded (melted?) together rather than glued, and i don't want to break it if i can avoid it or it is a waste of time to try.

Ideas, anyone?

Also, if anyone have any comments on the internal charging circuitry of the FT-50 (if it can charge NiMh or not)... i would be grateful.

73 de OZ2BRN
Brian

--
Best regards ; Brian Lodahl; lodahl@kom.auc.dk ;
Stud. M.Sc.E.E. (HochFreqvenzKleinEinbauM zeKreitslaufBaumeister) ;
http://www.kom.auc.dk/~lodahl ; Mobile: +45 5176 2999
RISC group 1050 ; Room A6-118 ; RF Integrated Systems & Circuits (RISC) ;
Aalborg University ; Frederik Bajers Vej 7; DK-9220 Aalborg ; Denmark ;
"PLACE LAME SIGNATURE TAG _HERE_ OR LEAVE BLANK FOR ANNOYANCE OF RECIPIENT"

2313. Re: Artificial Gnd Tuner?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 14:39:09 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <wSudncpdwI0E5B2jXTWcpQ@ctc.net>
Source record: 36619

> Has anybody ever made an "artificial gnd" tuner
> for 80-10 mtrs?
>

Doesn't MFJ make something like that ?
Modle 934.
Thought I saw something eles along those lines from them several years ago.

2314. Artificial Gnd Tuner?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 15:29:12 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <cB_fa.49304$S%3.1685068@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36618

Has anybody ever made an "artificial gnd" tuner
for 80-10 mtrs?

2315. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 16:03:22 UTC
From: BitChaser <BitChaserDebug@debug.comcast.net>
Message-ID: <v80vebes8a1id9@corp.supernews.com>
Source record: 36620
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Brian Lodahl wrote:
> Repost from like a month ago, but here we go again....
> [!! crossposted in
> rec.radio.amateur.equipment, rec.radio.amateur.homebrew,
> rec.radio.amateur.misc]
>
> ---
>
> Hi,
>
> I'm thinking about changing my NiCd cells in the battery for my Yaesu FT-50
> Handheld to NiMh type instead. Mainly for 2 reasons:
> 1) larger capacity and 2) the old ones cannot hold their capacity for longer
> periods of time anymore.
>
> The battery is of the type FNB-41, 9.6 Volts and 600 mAh. I don't know about
> the number of cells, their size or voltage, but i bet it is 8x1.2 Volts.....
>
> Does anyone have any experience in opening the battery case for this
> particular type of battery? I have an idea about the casing being welded
> (melted?) together rather than glued, and i don't want to break it if i can
> avoid it or it is a waste of time to try.
>
> Ideas, anyone?
>
> Also, if anyone have any comments on the internal charging circuitry of the
> FT-50 (if it can charge NiMh or not)... i would be grateful.

I changed my battery to the NiMH FNB-41 recently and I love it. And I
had the same ideas about cracking open the case and such. But before I
did I did a search the web and purchased one for less than 1/2 the price
(including shipping!) than I could get it from our local ham store.
Check out www.pandacomm.org.

At that price it was not worth the hassle for me.

Best Regards and 73's,
H Johnson

KG4WOU SkyWarn and RACES Member
www.kg4wou.com FT-50R, Kenwood TM-731A

********** SPAM FILTER IN PLACE ********
Debug the reply-to for correct e-mail address.

2316. FA: Air Wound Coil -- 32 uH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 16:41:18 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <OE%fa.5731$ns6.231801@news2.east.cox.net>
Source record: 36621
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015264353

Thanks for looking..

Larry
KQ4BY

2317. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 17:08:08 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5q2dnmvd1@titan.btinternet.com>
Source record: 36622
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Brian Lodahl" <lodahl@kom.auc.dk> wrote in message
news:b5ponb$pa3$1@sunsite.dk...
> I'm thinking about changing my NiCd cells in the battery for my Yaesu
FT-50
> Handheld to NiMh type instead. Mainly for 2 reasons:
> 1) larger capacity and 2) the old ones cannot hold their capacity for
longer
> periods of time anymore.
>
> The battery is of the type FNB-41, 9.6 Volts and 600 mAh. I don't know
about
> the number of cells, their size or voltage, but i bet it is 8x1.2
Volts.....
>
> Does anyone have any experience in opening the battery case for this
> particular type of battery? I have an idea about the casing being welded
> (melted?) together rather than glued, and i don't want to break it if i
can
> avoid it or it is a waste of time to try.
>
> Ideas, anyone?

Haven't tried it myself, but I've heard that putting the battery pack in a
freezer for an hour or so weakens the joints, enabling it to be easily
opened.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2318. Re: antenna tuning question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 17:15:52 UTC
From: averyfineman@aol.com
Message-ID: <20030325121552.23139.00001650@mb-da.aol.com>
Source record: 36623

In article <CoFfa.185$SN5.150144166@newssvr12.news.prodigy.com>, "Larry D. Clark" <buddycl@swbell.net> writes:

>while doing research on mobile antennas
>for my automobile, the thought has occurred
>to me that it was theoritcally possible to tune
>an antenna using a permeability tuned coil
>much like using a permeability tuned vfo.
>since i have not seen such an antenna,
>the question is why is it not done? to expensive?
>not power handling ability? or what???

First of all, as Roy Lewallen pointed out, the inductance variation wouldn't be large. Core-in to core-out of either powdered iron or a brass slug is roughly 3:1 inductance change, maximum (for power-handling apps). That might be nice for a single-band installations or maybe two bands having close geometic frequency centers.

Second, there's a matter of practicality. In a mobile installation it's a lot of trouble to have variable components and their moving parts (gears, motors etc.) both in a "hostile" environment (rain, snow, etc.) and needing power...plus the servo control in analog form rather than digital.

Countering the "core losses," simply check out the modern step-selected fixed inductors in modern automatic tuners: Toroids wound on powdered-iron cores. No problems...those can handle 2 KW or so from several ready-made AAT manufacturers. As toroids, they can be packed closer together with minimal effect on neighboring components and with minimal EM fields around them.

The step-sequence inductances and capacitances of modern AATs are relay-selected with a wider range than physically-variable L or C. Steps in a 1-2-4-8-16-32-64-128 sequence are more easily selected digitally with a resolution equal to 0.4% of full scale for a binary sequence of eight (as illustrated). Relay contacts may be sealed from the environment, have very high "off" resistance and very low "on" resistance (perhaps better than the roller contact on an old variable inductor system).

The arguemnt of needing "infinite" variablility via analog tuning has no good argument since the actual tuning of nearly all AATs, analog or digital, is broad enough that fine resolution is not "seen" by any antenna tuner. Step-increments are just fine - as proven - over the entire HF range and a bit beyond (most go down to 2 MHz and less). The SGC line of automatic antenna tuners is a good example, used

as easily in non-amateur antenna tuning applications over HF.
A digital step-selection L and C AAT can be automated by a 1-chip micro (perhaps with relay coil drivers outboard...depends on relay coil requirements...no problem since they operate saturated or cut off) or operated remotely by a "human microprocessor" through several ways.

If an antenna tuner is slightly off its optimum setting, there won't be any discernable variation in signal strength coming or going. That's analyzable many ways too, but takes some skull sweat and time.

Len Anderson
retired (from regular hours) electronic engineer person

2319. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 17:26:38 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18ea312a70ee274d98a110@news.inreach.net>
Source record: 36609
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <3E7F35C9.EF586FB4@earthlink.net>, mike.terrell@earthlink.net
mentioned...
> Watson Ammonium Chloride Name wrote:
> >
> > In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > > Tarmo Tammaru wrote:
> > > >
> > > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > > is?
> > > >
> > > > Tam/WB2TT
> > >
> > > A Chevvy V8 on a Harley, obviously.
> >
> > "You call that a chopper? THIS is a chopper!"
> > http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> > Thanks, google.
>
>
> My dog was named Chopper. He was a Rat Terrier we had for about 10
> years. Strong willed, stubborn, and quite a clown. Kind of like a
> Usenet troll or two that I've seen. :)

"Of all the dog breeds, the terrier is the best. Of all the terriers,
the scotty is the best." I dunno where I read that, but we had a runt
scotty when I was a kid. Good dawg.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

2320. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 17:32:29 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18ea3284a94ec15098a111@news.inreach.net>
Source record: 36610
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <9miu7v0hpu21r2pcbd7n5u0hme5rthsafg@4ax.com>,
jjlarkin@highSNIPlandTHIStechPLEASEnology.com mentioned...
[snip]

> The early Fluke and HP differential voltmeters used mechanical,
> vibrator-type choppers. Choppers were widely used in servo systems.

I used one of the Fluke differential voltmeters when I was in the army.
Today, people just don't appreciate how much time and labor a DMM saves
them. Give them a differential voltmeter to use, and let them realize
how it's done, manually.

> John

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

2321. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 17:48:35 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3e80940e_2@corp-news.newsgroups.com>
Source record: 36624

Jeremy Becnel wrote:
> Guys and gals,
>
> Does anyone know where I can get a 20 henry, 500 ohm filter choke? Im
> wanting to start building the first set in the "Radio For The Millions"
> book. I can get everything else either locally or online, but not a friggin
> 20h 500 ohm filter choke.
>
> Anything that could be easily substituted for it?
>
> Jeremy
> KC5TEK
>

Hi Jeremy,

Try this link:

http://www.hammondmfg.com/153.htm

It might have what you need. Any electronic shop should be able to order
for you.

cheers

--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

2322. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 21:55:32 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36625
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Thomas <zak@spam.invalid> wrote in message
news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> Ham wrote:
> > My recollection is that HP made an expensive and very sensitive meter
that used
> > a nice mechanical chopper in it. I think I remember having one on my
bench for
> > a few weeks in the early 1960s.
>
> I owned something (fluke?) with an analog meter, and a current/volts
setting.
>
> It used neon lamps to do the chopping. Someone stole all the transistors,
and
> all that was left were sockets. I measured and tried surplus transistors
until
> it worked, and it did. The needle wasn't entirely stable (noise?) but
> sensitivity seemed to be okay, it could measure a permanent magnet moving
fairly
> slowly across a single wire quite well.
>
> Later I gave it away.
>
>
> Thomas

Let's not forget Ballantine Labs. There was a very good true RMS analog meter that used a mech chopper amplifier to handle the output from the tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's. Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite accurate.

--
Just replace the obvious with my call for E-mail--I hate Spam, unless it comes in a can, and even then......

2323. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 22:07:59 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <3r4ga.49665$S%3.1713226@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36626

20 Henry!
Well, you could get a big old iron core transformer and only use one
winding...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Jeremy Becnel" <desfox_at_sydcom.net> wrote in message
news:3e7fe00d$1_5@corp.newsgroups.com...
> Guys and gals,
>
> Does anyone know where I can get a 20 henry, 500 ohm filter choke? Im
> wanting to start building the first set in the "Radio For The Millions"
> book. I can get everything else either locally or online, but not a
friggin
> 20h 500 ohm filter choke.
>
> Anything that could be easily substituted for it?
>
> Jeremy
> KC5TEK
>
>
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2324. Re: 'Rock Mite': any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 22:37:45 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v81mlqmgfue262@corp.supernews.com>
Source record: 36627

"scharkalvin" <wa2mze@bellsouth.net> wrote in message
news:3E7FC403.70603@bellsouth.net...

> Well his description of the program in that chip sounded good.
> Amazing how much you can stuff into an 8 pin pic.

Don't get me wrong, Dave is a great designer. But his design is for a more or less minimal keyer, with some other control functions as well. Likely you won't use those other functions. There are several keyers in 8 pin packages with a variety of capabilities and a range of prices. The TiCK is the most popular, although I understand delivery is a bit slow lately. The TiCK-1 is the basic part, the TiCK-2 adds 2 message memories, and the TiCK-4 adds nonvolatile parameter storage (a must-have in my book!) The TiCK-3 is available in surface mount if you want tiny. There are also keyers from Harbor Beach and N1EL (I could be off a little on these names) that have additional/different features. All are 8 pin DIP formats. The TiCK has a speed setting scheme similar to Dave's, I think it's the Harbor Beach where you add a pot to set the speed instead. If you don't mind an 18 pin package, you can easily roll your own from a PIC and get your favorite feature set! For instance, I found that I REALLY preferred the scheme on the K1 where you have up and down speed buttons and an LCD display of the speed selected. So I programmed a PIC to do that. (Not for sale but I'd be happy to share the code).

> East coast yes, but SOUTH not north. I'm in the FT
> Lauderdale area.

I was thinking east more from the standpoint of European broadcast QRM than NYC QRM. Frankly, I don't know what sort of a problem that is in FL. However, farther south, 20 is a better bet because it stays open later, although you probably won't get the late night over the pole stuff we get up here in the frozen north.

..

2325. Re: ptfe coax question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 22:49:48 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1048632590.171104@auth2.dns.griffin.net.uk>
Source record: 36628

thanks guys..

looks like rg303 it is..
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1048540990.519010@auth2.dns.griffin.net.uk...
> hi there..
>
> can anyone tell me the max power rating in watts (continious) at 2m thin
50r
> (like rg174) ptfe min coax will take safely. I am making a wilkinson
> combiner and need to connect it to the outputs of the amp modules, and
would
> like to use it rather than rg213 etc.each length will only be 150mm (6in)
> max..
> the amp is made of 2x300w modules..
>
> thanks simon G0ZEN...
>
> p.s. combiner is using microwave copper sheaved 75r semirigid..
>
>

2326. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-25 23:03:26 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E823293.2528AF23@rica.net>
Source record: 36629

Jeremy Becnel wrote:
>
> Guys and gals,
>
> Does anyone know where I can get a 20 henry, 500 ohm filter choke? Im
> wanting to start building the first set in the "Radio For The Millions"
> book. I can get everything else either locally or online, but not a friggin
> 20h 500 ohm filter choke.
>
> Anything that could be easily substituted for it?

A much more important spec for this choke than its resistance is its
saturation current. Can you calculate how much current this choke
must pass without saturating?

--
John Popelish

2327. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 00:32:26 UTC
From: ddwyer <dd@ddwyer.demon.co.uk>
Message-ID: <AiEQQKAaUPg+Ewy8@ddwyer.demon.co.uk>
Source record: 36631
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <dTSfa.244$c71.76@news02.roc.ny.frontiernet.net>, Dave M.
<gadget@frontiernet.net> writes
> I'm 49 and I know of them. In instrumentation amplifiers, they are used to
>modulate the input voltage after which the modulated signal is detected as a
>D.C. voltage with an offset determined by the precision of the match of the
>two choppers. At the time, the precision D.C. instrumentation amplifier did
>not exist.
>
>Dave M.
>
>
>Don Lancaster <don@tinaja.com> wrote in message
>news:3E7E517D.2BB1B17A@tinaja.com...
>> Tarmo Tammaru wrote:
>> >
>> > You realize that nobody under the age of 60 knows what a chopper
>amplifier
>> > is?
>> >
>> > Tam/WB2TT
>>
>> A Chevvy V8 on a Harley, obviously.
>>
>> --
>> Many thanks,
>>
>> Don Lancaster
>> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
>> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>>
>> Please visit my GURU's LAIR web site at http://www.tinaja.com
>>
>
>
No-ones mentioned mercury wetted ....sexy or what?
--
ddwyer

2328. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 00:39:25 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <v81tm22stn8oec@corp.supernews.com>
Source record: 36630

"John S. MacKay" <k35454@direct.ca> wrote in message news:...
> I have 2 NOS in box Hammond 30-65X... 30 henries 65 ma 400ohms. $17.00 ea
> plus shipping from area Vancouver, B.C. VE7AFN Miki. Also 1 NOS Hammond
> 40896... 30 henries 65 ma 400 ohms.. Same price.
>
>

2329. Keyer circuit for IC-735 (does anyone know another?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 01:21:23 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E810093.F58ACF55@osite.com.br>
Source record: 36632

Well... with the AT power soucer conversion on its way,
I am thinking about a eletronic keyer for my IC-735, since I
plan to op CW but am not willing to pay many bucks for a
ICOM one.

Some time ago, I've found this circuit on czech web page.
The english is very crude, but he translated upon my
request, so... i can only thank Karel for the effort.

http://ama-cb.nagano.cz/IC735_elbug_eng.htm

I would like if anyone can send their comments on this
particular circuit or have another one at hand. I may even
build many and try what suits me best. An extra would be if
someone points me to a IC-725 keyer circuit, for the group's
radio.

Thanks
VY 73 de PU2PIX
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2330. WTB: B&W 850A tank assy.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 01:29:52 UTC
From: John Ahrens <bjahrens@mhcable.com>
Message-ID: <3E810290.9040001@mhcable.com>
Source record: 36633

Looking for B&W 850A Coil assy.
Call or reply to this email.
815-678-5672 after 6:00 pm
Thanks
John KC2FXE

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2331. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 03:03:06 UTC
From: Al <afjjay@earthlink.net>
Message-ID: <afjjay-563FBA.22030625032003@news.bellatlantic.net>
Source record: 36634
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article
<of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>,
"WB2JKX" <mycall-N0SPAM@arrl.net> wrote:

> Thomas <zak@spam.invalid> wrote in message
> news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> > Ham wrote:
> > > My recollection is that HP made an expensive and very sensitive meter
> that used
> > > a nice mechanical chopper in it. I think I remember having one on my
> bench for
> > > a few weeks in the early 1960s.
> >
> > I owned something (fluke?) with an analog meter, and a current/volts
> setting.
> >
> > It used neon lamps to do the chopping. Someone stole all the transistors,
> and
> > all that was left were sockets. I measured and tried surplus transistors
> until
> > it worked, and it did. The needle wasn't entirely stable (noise?) but
> > sensitivity seemed to be okay, it could measure a permanent magnet moving
> fairly
> > slowly across a single wire quite well.
> >
> > Later I gave it away.
> >
> >
> > Thomas
>
> Let's not forget Ballantine Labs. There was a very good true RMS analog
> meter that used a mech chopper amplifier to handle the output from the
> tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's.
> Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite
> accurate.
>

In the sixties, I used an analog computer which used chopper stabilized
amplifiers as op amps. We used it to solve simultaneous diffential
equations. It took hours to program with patch cords and to adust
coefficients, but it took only a couple of seconds to print out the
solution in the form of a graph on graph paper. The computers were made
by some company in New Jersey whose name escapes me now.

Al

--

Remove extra j from the address to reply.

2332. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 04:45:41 UTC
From: ham <sp@m.not>
Message-ID: <3E81307B.5AB22E3D@m.not>
Source record: 36635
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Electronic Associates Incorporated
Precision Analog Computing Equipment (PACE)
Long Branch, New Jersey

I'm holding in my hand one of their plastic templates to draw the analog computer blocks. I've had it in my desk drawer for all these years 40+ and another at work and I still use it for simple drawing in preference to a ruler and used to have a second one that has escaped over the years. I think somebody lifted it from my desk at work.

I loved those computers and would much prefer to work with them rather than those klunky (at the time) digital things that never worked for longer than a half hour or so before having to be repaired. I used it at grad school at Northwestern in the 1959 and 1960 school years. And wasn't that a wonderful Non Linear Systems (San Diego) digital voltmeter with the stack of engraved Plexiglas digits edge lit for a readout great and impressive?

There was something very satisfying about tweaking a coefficient pot and watching the trace on the strip chart change in response as the red ink splatter from the pen left a track across the front of your shirt if you were impatient and opened the cover while it was still running.

Besides sitting in front of the computer with all those ten turn pots (a couple of hundred in a top end system) and all those plug in amps was sort of like being in command of a spaceship or something or so it seemed in those naive times.

Of course Northwestern's other Analog computer, circa 1945, took up a whole half of the room and a full wall with full size inductors, capacitors and the like. I never saw anybody using it.

Al wrote:

> In article
> <of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>,
> "WB2JKX" <mycall-N0SPAM@arrl.net> wrote:
>
> > Thomas <zak@spam.invalid> wrote in message
> > news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> > > Ham wrote:
> > > > My recollection is that HP made an expensive and very sensitive meter
> > that used
> > > > > a nice mechanical chopper in it. I think I remember having one on my
> > bench for
> > > > > a few weeks in the early 1960s.

> > >
> > > I owned something (fluke?) with an analog meter, and a current/volts
> > setting.
> > >
> > > It used neon lamps to do the chopping. Someone stole all the transistors,
> > and
> > > all that was left were sockets. I measured and tried surplus transistors
> > until
> > > it worked, and it did. The needle wasn't entirely stable (noise?) but
> > > sensitivity seemed to be okay, it could measure a permanent magnet moving
> > fairly
> > > slowly across a single wire quite well.
> > >
> > > Later I gave it away.
> > >
> > >
> > > Thomas
> >
> > Let's not forget Ballantine Labs. There was a very good true RMS analog
> > meter that used a mech chopper amplifier to handle the output from the
> > tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's.
> > Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite
> > accurate.
> >
>
> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.
>
> Al
>
> --
>
> Remove extra j from the address to reply.

2333. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 04:46:26 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <b5rbb2$e79$1@mail.specsol.com>
Source record: 36636
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In rec.radio.amateur.antenna Al <afjjay@earthlink.net> wrote:

> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.

> Al

> --

> Remove extra j from the address to reply.

Memories...

In the sixties I maintained a big analog computer (tube based) that had
motor driven chopper stabilized op amps.

It too solved simultaneous diffential equations, though the solutions
were in real time.

The problem was hard wired and there were these huge (feet in diameter)
oil filled servo driven pots to derive a solution.

It was the fire control computer for the Nike Hercules anti-aircraft
missile system.

My fondest memory is hot swapping a bad op amp one day (you weren't
supposed to do that, but this was not in the US and aircraft with
red stars were heading our way) and getting knocked to my knees by the
charge in one of the B+ caps. Turned out the bleeder resistor was in the
mainframe, not in the op amp itself.

--
Jim Pennino

2334. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 06:59:06 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <v8589sdl4qa3ce@corp.supernews.com>
Source record: 36567
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> > Does anyone have any experience in opening the battery case for this
> > particular type of battery?

> Haven't tried it myself, but I've heard that putting the battery pack in a
> freezer for an hour or so weakens the joints, enabling it to be easily
> opened.
>
> Leon
> --
> Leon Heller, G1HSM

I've done it several times to FNB-4A packs. Freezing helps,
but in the newest of my packs, Yaesu used a *lot* more
glue, making it very difficult to open without slight damage.
Maybe they want to discourage replacement of the pack?

My experience with the NiMH cells is that they self-discharge
much faster than NiCd batteries. Also, it seems that they
are a bit more fussy about charging. Maxim makes several
chips specifically for NiMH batteries, and I may build up a
charger using one.

73, John - K6QQ

2335. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 07:41:17 UTC
From: Brian Lodahl <lodahl@kom.auc.dk>
Message-ID: <b5rlnpjml1@sunsite.dk>
Source record: 36637
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi KG4WOU,

Thanks for sharing,
By the way, www.pandacomm.org seems to be a dead link..... howcome ?

/73's
Brian OZ2BRN

"BitChaser" <BitChaserDebug@debug.comcast.net> wrote in message
news:v80vebes8a1id9@corp.supernews.com...
> Brian Lodahl wrote:
> > Repost from like a month ago, but here we go again....
> > [!! crossposted in
> > rec.radio.amateur.equipment, rec.radio.amateur.homebrew,
> > rec.radio.amateur.misc]
> >
> > ---------------------------------
> >
> > Hi,
> >
> > I'm thinking about changing my NiCd cells in the battery for my Yaesu
FT-50
> > Handheld to NiMh type instead. Mainly for 2 reasons:
> > 1) larger capacity and 2) the old ones cannot hold their capacity for
longer
> > periods of time anymore.
> >
> > The battery is of the type FNB-41, 9.6 Volts and 600 mAh. I don't know
about
> > the number of cells, their size or voltage, but i bet it is 8x1.2
Volts.....
> >
> > Does anyone have any experience in opening the battery case for this
> > particular type of battery? I have an idea about the casing being welded
> > (melted?) together rather than glued, and i don't want to break it if i
can
> > avoid it or it is a waste of time to try.
> >
> > Ideas, anyone?
> >
> > Also, if anyone have any comments on the internal charging circuitry of
the
> > FT-50 (if it can charge NiMh or not)... i would be grateful.
>

> I changed my battery to the NiMH FNB-41 recently and I love it. And I
> had the same ideas about cracking open the case and such. But before I
> did I did a search the web and purchased one for less than 1/2 the price
> (including shipping!) than I could get it from our local ham store.
> Check out www.pandacomm.org.
>
> At that price it was not worth the hassle for me.
>
> Best Regards and 73's,
> H Johnson
> ----------
> KG4WOU SkyWarn and RACES Member
> www.kg4wou.com FT-50R, Kenwood TM-731A
>
> ********** SPAM FILTER IN PLACE ********
> Debug the reply-to for correct e-mail address.
> ----------
>

2336. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 07:47:18 UTC
From: Brian Lodahl <lodahl@kom.auc.dk>
Message-ID: <b5rm31lth1@sunsite.dk>
Source record: 36638
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi, G1HSM,
Thanks for the tip. I think i'll try it out soon.... because by now the battery seems to have died completely. I haven't tryed to boost-charge the NiCd-cells yet or anything fancy, mainly because i still want to improve the capacity of the battery anyway.....

73's
Brian OZ2BRN

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:b5q2dnmvd1@titan.btinternet.com...
>
> "Brian Lodahl" <lodahl@kom.auc.dk> wrote in message
> news:b5ponb$pa3$1@sunsite.dk...
> > I'm thinking about changing my NiCd cells in the battery for my Yaesu
> FT-50
> > Handheld to NiMh type instead. Mainly for 2 reasons:
> > 1) larger capacity and 2) the old ones cannot hold their capacity for
> longer
> > periods of time anymore.
> >
> > The battery is of the type FNB-41, 9.6 Volts and 600 mAh. I don't know
> about
> > the number of cells, their size or voltage, but i bet it is 8x1.2
> Volts.....
> >
> > Does anyone have any experience in opening the battery case for this
> > particular type of battery? I have an idea about the casing being welded
> > (melted?) together rather than glued, and i don't want to break it if i
> can
> > avoid it or it is a waste of time to try.
> >
> > Ideas, anyone?
>
> Haven't tried it myself, but I've heard that putting the battery pack in a
> freezer for an hour or so weakens the joints, enabling it to be easily
> opened.
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>

>

2337. Re: Keyer circuit for IC-735 (does anyone know another?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 08:00:45 UTC
From: PaoloC <fake.address@asdrubale.net>
Message-ID: <3e816468$1@news.opennet.it>
Source record: 36639

"Paulo Marcondes" <pepm@osite.com.br> ha scritto nel messaggio
news:3E810093.F58ACF55@osite.com.br...

Good morning Paulo

> http://ama-cb.nagano.cz/IC735_elbug_eng.htm
>
> I would like if anyone can send their comments on this
> particular circuit or have another one at hand. I may even
> build many and try what suits me best. An extra would be if
> someone points me to a IC-725 keyer circuit, for the group's
> radio.

Very nice project, altought I haven't analyzed the circuit in details. I own a IC-728, and I guess also the 735 works only with vertical keys. Anyway, any keyer circuit is good for any radio, I'd say: look on Internet for the circuit that is easier to build for you!

I have personally built this:
http://digilander.libero.it/vcoletti/pic/keyer/index22.html

but you would need someone to program the PIC. I have also found this project by Harry

http://w1.859.telia.com/~u85920178/use/simplek.htm

but never tried myself.

73/72!
Paolo IK1ZYW

2338. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 09:38:13 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com.notformail!>
Message-ID: <rhr28vg2p61qtrs9h2i32fs9ovr2ardn1t@4ax.com>
Source record: 36640

On Tue, 25 Mar 2003 22:07:59 GMT, "Brian Griffey"
<briangriffey@worldnet.att.net> opined thusly:

>20 Henry!
>Well, you could get a big old iron core transformer and only use one
>winding...

Alternatively, just order a large reel of 0.7mm enameled copper wire
and shove a bunch of nails down the center. :-)

--

"What is now proved was once only imagin'd"
- William Blake, 1793

2339. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 14:10:56 UTC
From: Al <afjjay@earthlink.net>
Message-ID: <afjjay-02EF55.09105726032003@news.bellatlantic.net>
Source record: 36641
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <3E81307B.5AB22E3D@m.not>, ham <sp@m.not> wrote:

> Electronic Associates Incorporated
> Precision Analog Computing Equipment (PACE)
> Long Branch, New Jersey
>
<big, big snip>
>
> > Al wrote:
> >
> > In the sixties, I used an analog computer which used chopper stabilized
> > amplifiers as op amps. We used it to solve simultaneous diffential
> > equations. It took hours to program with patch cords and to adust
> > coefficients, but it took only a couple of seconds to print out the
> > solution in the form of a graph on graph paper. The computers were made
> > by some company in New Jersey whose name escapes me now.
> >

Yes!!!! I think it was close to Fort Monmouth where the army did
electronics research. I also remember Long Branch as being a resort town
and sorta unusual for the location of a then high tech company.

I remember how happy my EE professors were when they got their first
rack mounted digital computer. The students weren't allowed anywhere
near it. We had to use the analog computers.

Al

--

Remove extra j from the address to reply.

2340. Dipole+coax+Radiation From Feedline

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 14:22:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5sd2c$6ca$1@hercules.btinternet.com>
Source record: 36642

```
--
=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================
```

2341. Dipole+Coax+Radiation From Feedline

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 14:24:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5sd7qchr1@titan.btinternet.com>
Source record: 36643

```
There's an improved program FEEDPOWR available from website below.
---
=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================
```

2342. Re: Keyer circuit for IC-735 (does anyone know another?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 14:26:07 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E81BDC5.7040504@invalid.invalid>
Source record: 36644

Paulo Marcondes wrote:
> Well... with the AT power soucer conversion on its way,
> I am thinking about a eletronic keyer for my IC-735, since I
> plan to op CW but am not willing to pay many bucks for a
> ICOM one.
>
> Some time ago, I've found this circuit on czech web page.
> The english is very crude, but he translated upon my
> request, so... i can only thank Karel for the effort.
>
> http://ama-cb.nagano.cz/IC735_elbug_eng.htm
>
> I would like if anyone can send their comments on this
> particular circuit or have another one at hand. I may even
> build many and try what suits me best. An extra would be if
> someone points me to a IC-725 keyer circuit, for the group's
> radio.

Check http://www.embres.com/tick.htm .

These keyer kits are easier to build and have a lot more features. But, OK1RR's circuit costs less money to build.

Any keyer made for a radio without vacuum tubes will work with any other radio without vacuum tubes. So the OK1RR circuit will work fine with the IC-725. The "embres.com" keyers will also work fine with the IC-725.

I hope to QSO you on 28MHz CW soon!
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2343. FA: Large 32 uh Air Wound Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 14:30:35 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <fQiga.7909$ns6.495807@news2.east.cox.net>
Source record: 36645
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015264353

Thanks for looking..

KQ4BY

2344. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 15:47:44 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5si1i$28t1c$2@hades.csu.net>
Source record: 36646
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

ddwyer wrote:
[snip]
>>Don Lancaster <don@tinaja.com> wrote in message
>>news:3E7E517D.2BB1B17A@tinaja.com...

>>>Tarmo Tammaru wrote:

>>>>You realize that nobody under the age of 60 knows what a chopper
>>>>amplifier is?
[snip]

>>>Please visit my GURU's LAIR web site at http://www.tinaja.com

> No-ones mentioned mercury wetted ....sexy or what?

Nowadays, if you mention the word mercury, the environmental police will
come out and quarantine your area and abate the toxic waste. :-P

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

2345. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 15:50:05 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5si5v$28t1c$3@hades.csu.net>
Source record: 36547
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Al wrote:
[snip]

> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.

While I'm on the subject of toxic waste, do you know why New York has
all the lawyers, and New Jersey has all the toxic waste?

A: New Jersey had first choice.

<G>

> Al

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

2346. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 16:01:16 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5siqv$28pag$1@hades.csu.net>
Source record: 36548
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

ham wrote:
> Electronic Associates Incorporated
> Precision Analog Computing Equipment (PACE)
> Long Branch, New Jersey

In the army I trained for radar repair at Ft Monmouth, right down the
street from Long Branch, N.J.

[snip]
> And wasn't that a wonderful Non Linear Systems
> (San Diego) digital voltmeter with the stack of engraved Plexiglas digits edge lit
> for a readout great and impressive?

Yes! The guy I worked for got one surplus, something was wrong with it.
It rattled a lot as the relays hunted for the input voltage. I don't
remember if it was a NLS, but it had those plexiglas edge-lit digits,
and it was a trip to watch them thru the windows. NLS later started
KayComp which became Kaypro Computers. I believe the guy's name was Kay.

>[snip]

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

2347. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 16:06:35 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5sj4u$28o9g$1@hades.csu.net>
Source record: 36549
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jim Pennino wrote:
[snip]

> Memories...

> In the sixties I maintained a big analog computer (tube based) that had
> motor driven chopper stabilized op amps.

> It too solved simultaneous diffential equations, though the solutions
> were in real time.

> The problem was hard wired and there were these huge (feet in diameter)
> oil filled servo driven pots to derive a solution.

> It was the fire control computer for the Nike Hercules anti-aircraft
> missile system.

> My fondest memory is hot swapping a bad op amp one day (you weren't
> supposed to do that, but this was not in the US and aircraft with
> red stars were heading our way) and getting knocked to my knees by the
> charge in one of the B+ caps. Turned out the bleeder resistor was in the
> mainframe, not in the op amp itself.

I hope you're saying fondest memory in jest, because I wouldn't consider
getting knocked on my knees a fond memory.

I worked on the Nike Herc search radars when I was in the army. I
didn't get a chance to see any of that fire control stuff.

Seems hard to believe that what they used back in those days took up a
whole room, yet today could fit in a pocket, or even a wristwatch.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)---------------
From a fully deputized officer of the Apostrophe Police!

2348. Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 16:41:05 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303260841.98fb276@posting.google.com>
Source record: 36550
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Can anyone here tell me if I need different ferrite cores? The SWR meter I am working on seems to work OK on the lower bands but does not work on the higher bands. I don't think I have any stray capacitances or inductances in my circuit. (This is HF, not VHF, UHF, or microwave.) However, I do understand that ferrite cores have their limitations, and I believe those are the source of my problem.

The design I am using is based on that portrayed in the last of the three schematics at:
http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html

One difference between my design and that one is that I apply an RC low-pass filter to the diode outputs consisting of a .001uF capacitor and a 100k-ohm resistor in parallel.

The ferrite cores I am using have #43 type material. The dimensions are .5-in. thickness, .625-in. outer diameter, and .3125-in. inner diameter. The turns ratios are 1:10 for both. I noticed that most of the other SWR meter designs use smaller cores. (I'm wondering if I have stray capacitance between the primary and secondary wires due to the relatively long length of wire my cores use as compared to the wire lengths of smaller cores.)

I tested my design by connecting it to my transceiver and dummy load. The dummy load is supposed to be 50 ohms, but it has stray capacitances in parallel to the load, and this causes the SWR to go up as the frequency increases. I used full power in order to minimize the effects of diode losses.

At 1.8MHz, my MFJ SWR meter showed an SWR of 1.9 and 60W of power. The forward voltage sample is 6.46V DC, or 10% of the actual forward voltage. The reflected voltage sample is 1.707V. This gives an SWR of 1.7. Considering that the MFJ SWR cross-needle meter has mediocre resolution, these results seem reasonable.

At 3.8MHz, my MFJ SWR meter showed an SWR of 3 and 20W of power. (As you can see, the high SWR protection circuit in the transceiver was at work to limit transmitted power when the SWR is high.) I had 3.578V forward, 1.795V reflected, and a measured SWR of 3. So far, so good.

At 7.2MHz, my MFJ SWR meter showed an SWR of 5 and 15W of power. The measurements were 2.838V forward, 2.166V reflected, and an SWR of 7.5. Considering the awful resolution of the MFJ meter at high SWRs, this seems reasonable.

At 10.12MHz, my MFJ SWR meter showed an SWR between 5 and infinity. The measurements were 2.941 forward, 2.673 reflected, and an SWR of 21.

Around the 20m band, my SWR meter begins to fail. At all higher frequencies, my MFJ meter showed 10-20W of power and an extremely high SWR. The forward reflected power drifted down from 2.692V at 14.3MHz to 1.5V at 29MHz. At 14.3MHz, my reflected voltage was 1.3% HIGHER than my forward voltage. At still higher frequencies, my measured SWR actually dropped.

My measured SWR was infinity at 14.3MHz, 89 at 18.1MHz, 13 at 21.3MHz, 5.7 at 24.9MHz, and only 3.9 at 29MHz.

Can anyone help me? Do I need a smaller #43 core? Should I switch to a #61 core?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

2349. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 17:09:15 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <VeOcnSn7ndY8cByjXTWc3A@ctc.net>
Source record: 36553
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

> Can anyone here tell me if I need different ferrite cores? The SWR
> meter I am working on seems to work OK on the lower bands but does not
> work on the higher bands. I don't think I have any stray capacitances
> or inductances in my circuit. (This is HF, not VHF, UHF,

YOu need a beter dummy load to do the tests. YOu should be using a good dummy load and to get the swr parallel 2 or more good 50 ohm loads. Then use some capacitors or inductors and calculate the swr of the load.

Also you could probalby use a beter standard than the MFJ sutff.
I bought an antenna tuner made by MFJ. I did recaliberate the wattmeter against a Bird and a surplus wattmeter. The MRJ was a bit off from the other 2.

It is difficult to do lab quality measurments with low quality equipment.

2350. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 17:26:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nom38vokg5ujgr265qskimsg5jb1iiq1ul@4ax.com>
Source record: 36551
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 26 Mar 2003 08:41:05 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>
>Can anyone help me? Do I need a smaller #43 core?

Hi Jason,

You decide your design is faulty because it cannot measure a very poor load at high frequency. Faulty logic and poor technique is closer to the problem. Am I to believe that this extremely poor load is your dummy load with stray coupling??? Or is it simply an extremely poor load? Why? Don't you think you should see if it worked with nominal first? Don't you think that calibrated mismatches rather than opportunistic SWRs would help resolve your issues? Consider the question and ANY answer: you could have answered it yourself if you had simply observed my comments long ago about buying several formulations and forms and substituting. That path to a solution would have taken perhaps twice as long as the time of your having written a plea for someone else to do it for you.

Beyond that, how is it that the core becomes suspect because the circuit failed? Jason, you are not showing much savvy in the lab by skipping the fundamentals. This is poor second year lab stuff, not graduate quality. Do you have an adviser or thesis reviewer? Fire same, they clearly have no interest.

73's
Richard Clark, KB7QHC

2351. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 17:42:26 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <6Elga.244637$qi4.126757@rwcrnsc54>
Source record: 36552
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
> Jim Pennino wrote:
> [snip]
>
>> Memories...
>
>
>> In the sixties I maintained a big analog computer (tube based) that had
>> motor driven chopper stabilized op amps.
>
>
>> It too solved simultaneous diffential equations, though the solutions
>> were in real time.
>
>
>> The problem was hard wired and there were these huge (feet in diameter)
>> oil filled servo driven pots to derive a solution.
>
>
>> It was the fire control computer for the Nike Hercules anti-aircraft
>> missile system.
>
>
>> My fondest memory is hot swapping a bad op amp one day (you weren't
>> supposed to do that, but this was not in the US and aircraft with
>> red stars were heading our way) and getting knocked to my knees by the
>> charge in one of the B+ caps. Turned out the bleeder resistor was in the
>> mainframe, not in the op amp itself.
>
>
> I hope you're saying fondest memory in jest, because I wouldn't consider
> getting knocked on my knees a fond memory.
>
> I worked on the Nike Herc search radars when I was in the army. I
> didn't get a chance to see any of that fire control stuff.
>
> Seems hard to believe that what they used back in those days took up a
> whole room, yet today could fit in a pocket, or even a wristwatch.
>
I can rememner the first battery level digital computer for Arty, The
FADAC. It was a monster with a single platter disc drive as it's memory.
It got replaced by th HP45.

Bill Higdon

2352. MB-8718 integrated circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 19:03:11 UTC
From: mzasada@wp.pl
Message-ID: <a12ee350.0303261103.36a83ea3@posting.google.com>
Source record: 36554
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Does anybody have any idea when I can find the MB8718 integrated
circuit from the Yaesy FT-680 transceiver PLL circuit? Unfortunatelly
"taesuparts" responded, that it's already discontinued (PART #
CS0713001 (DISCONTINUED))...

73,

Michal SP5TAT/AG4VP;

2353. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 20:07:38 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <p8048vc3mhqqlmvff1kim6767qe5jpchmt@4ax.com>
Source record: 36555
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 26 Mar 2003 08:41:05 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

|Can anyone here tell me if I need different ferrite cores?

Maybe, but how can you tell with the measurements you are making.

First you need a precision termination and some known mismatches for
standards. Some precision attenuators followed by a short will give
you known return losses.

These need so be in the same connector series as your test port, which
I hope isn't an SO-239. No adapters allowed.

Trash the MFJ. Do not try to measure one unknown by comparing to
another unknown.

Isn't this a school project? Don't you have access to a real lab?

Treat this as two projects. Eliminate the detection process until you
get the power sampling down. Your two transformers are just a 20 dB
bi-directional coupler. Measure its parameters separately using good
terminations all around and find out how it functions.

When you've got the coupler working, move on to the detection process.

2354. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 20:17:17 UTC
From: BitChaser <BitChaserDebug@debug.comcast.net>
Message-ID: <v842mdflth7ieb@corp.supernews.com>
Source record: 36556
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Brian Lodahl wrote:
> Hi KG4WOU,
>
> Thanks for sharing,
> By the way, www.pandacomm.org seems to be a dead link..... howcome ?
>

Hmmmm... don't know why. Just bought something from them the other too.
FWIW, their number is 800-870-1499.

Best Regards and 73's,
H Johnson

2355. Transformer wire ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 21:03:47 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <tb548vssn2k7etg5uql0s3vek2ve1eudrt@4ax.com>
Source record: 36557

Picked up a transformer that I want to use in my radio power supply
but I'm having a little trouble identifying all the leads...

It has 4 leads on one side which I have ID'd as low voltage outputs...
.3 and .4 ohms respectively. On the other side I have two leads that
are 115v 11 ohm input leads. Then I have two high voltage 600v outputs
with a 300v centertap. I then have one lead left over that dosen't
seem to be tied to anything using my ohm meter. Does anyone have a
clue as to what this lead is for?

thanks,
Tracy
Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2356. FS: NOS 7360 tubes, pair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 21:29:52 UTC
From: ethan <read_message@to.reply>
Message-ID: <kZoga.242556$6b3.710706@rwcrnsc51.ops.asp.att.net>
Source record: 36558
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

```
Pair of NOS RCA 7360
AES gets $47.25 per tube. I'd like $50 for the pair.
+ ship. from 98226

--

Reply to:
arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)
```

2357. Re: Transformer wire ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 23:25:50 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5tctt$kg7$1@sparta.btinternet.com>
Source record: 36559

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:tb548vssn2k7etg5uql0s3vek2ve1eudrt@4ax.com...
> Picked up a transformer that I want to use in my radio power supply
> but I'm having a little trouble identifying all the leads...
>
> It has 4 leads on one side which I have ID'd as low voltage outputs...
> .3 and .4 ohms respectively. On the other side I have two leads that
> are 115v 11 ohm input leads. Then I have two high voltage 600v outputs
> with a 300v centertap. I then have one lead left over that dosen't
> seem to be tied to anything using my ohm meter. Does anyone have a
> clue as to what this lead is for?

An inter-winding screen, probably.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2358. Re: Transformer wire ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-26 23:48:00 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <18f48vsnelf03gvikiupp5370q5bieshfq@4ax.com>
Source record: 36560

what is the purpose of that screen?

Tracy

On Wed, 26 Mar 2003 23:25:50 +0000 (UTC), "Leon Heller"
<leon_heller@hotmail.com> wrote:

>
>"Tracy Fort" <beerbarrel@cox.net> wrote in message
>news:tb548vssn2k7etg5uql0s3vek2ve1eudrt@4ax.com...
>> Picked up a transformer that I want to use in my radio power supply
>> but I'm having a little trouble identifying all the leads...
>>
>> It has 4 leads on one side which I have ID'd as low voltage outputs...
>> .3 and .4 ohms respectively. On the other side I have two leads that
>> are 115v 11 ohm input leads. Then I have two high voltage 600v outputs
>> with a 300v centertap. I then have one lead left over that dosen't
>> seem to be tied to anything using my ohm meter. Does anyone have a
>> clue as to what this lead is for?
>
>An inter-winding screen, probably.
>
>73, Leon

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2359. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 00:45:25 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E8249E5.4493B9C5@earthlink.net>
Source record: 36561
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> In the army I trained for radar repair at Ft Monmouth, right down the
> street from Long Branch, N.J.

They trained you to work on RADAR? They pulled me from the Weather
Vision section at Fort Rucker and sent me out to fix RADAR equipment
with no training. Of course they didn't train me to work on the CATV,
video, or microwave CARS equipment either. A draft notice, a MOS test,
and I was a broadcast engineer.
--

Michael A. Terrell
Central Florida

2360. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 00:47:38 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E824A77.BECDC089@earthlink.net>
Source record: 36562
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Nowadays, if you mention the word mercury, the environmental police will
> come out and quarantine your area and abate the toxic waste. :-P
> --

Even if you are just naming the planets in our solar system. :(

--

Michael A. Terrell
Central Florida

2361. FA: Large 27 uH Air Wound Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 00:58:23 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <P0sga.12255$ns6.602367@news2.east.cox.net>
Source record: 36563
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015522501

Thanks!

Larry
KQ4BY

2362. Re: FA: Large 27 uH Air Wound Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 01:16:26 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <rdk48v0g0b55uhs1n10qtjfom23pu7itr6@4ax.com>
Source record: 36564
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

You must be right down the street from me...

On Thu, 27 Mar 2003 00:58:23 GMT, "ga_boneyard"
<ga_boneyard@hotmail.com> wrote:

>Please see:
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015522501
>
>Thanks!
>
>Larry
>KQ4BY
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2363. Re: Minimount Wainwright

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 04:46:46 UTC
From: clive.broome@sdc.idt.com
Message-ID: <e9a7ab17.0303262046.40ced5ff@posting.google.com>
Source record: 36565
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

You could try using one of the small clamps available from RS
Components. The clamp Im thinking about has a nylon screw to set the
height and allows the lever to latch over and clamp the DUT positivly
onto the pads on the PCB. Ive used this on TSSOP chips and it is a
little bit fiddly to line the pins to the pads, it works amazingly
well. Plus its cheap,available and reusable.

The extra trace length of a socket compared to a clamp may or may not
be an issue, plus any board deskew you may need to add if you are
attempting to measure very accuratly. Figure about 6 pS per mm.

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:<b5pdtlitj1@hercules.btinternet.com>...
> "Alistair McEwan" <alistair@robots.ox.ac.uk> wrote in message
> news:Pine.GSO.3.96.1030325092030.7643A-100000@vaux...
> > Hi,
> >
> > Various application notes have warned me not to use sockets for high speed
> > analogue ICs, but alternatively use a Minimount system:
> > http://www.rdi-wainwright.com/
> >
> > I'd like to hear from anyone who has had experience with these as there is
> > little information on thier website or in the newsgroup archives. My
> > application is testing 10 of my own custom 68pin PLCC analogue chips at
> > clock frequencies up to 300MHz, with rise/fall times better than 1ns. I'm
> > not too keen on soldering 10 chips on and off my pcb.
>
> They used to use these sometimes for RF prototyping where I worked, once. I
> liberated a couple, but never used them.
>
> I needed something like them once that wasn't in their range, designed my
> own and had a few made. I sold the ones I didn't need - paid all my costs.
>
>
> >
> > How are the minimount systems removed from the PCB? Is it easy to remove
> > the excess glue so that another minimount can be placed? Is there any
> > soldering associated with minimount replacement and is it much easier than
> > removing a 68 pin plcc?
>
> The adhesive seems to be similar to double-sided tape, and should be easy to
> remove. Ease of replacement depends on how the Minimount is connected to the
> rest of the circuitry.
>

>
> >
> > > How much extra room on a PCB does the minimount take up and what typical
> > > inductance does each pin see? Is there really significant inductance
> > > saving over a surface mount socket?
>
> There is probably a lot more stray inductance and capacitance, because of
> the additional track length added to the leads.
>
> >
> > > Has anyone tested the difference between the 0.8mm and 1.5/2mm minimounts?
> > > Is there a significant frequency improvement with the thinner boards
> > > and how much more difficult are they to work with?
>
> The mounts I had made were 0.8mm thick. I had no problems with them.
>
>
> 73, Leon

2364. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 05:18:29 UTC
From: "Dave M." <gadget@frontiernet.net>
Message-ID: <FQvga.184$NG2.52@news02.roc.ny.frontiernet.net>
Source record: 36566
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

```
Lizard Blizzard <NOSPAM@rsccd.org> wrote in message
news:b5si1i$28t1c$2@hades.csu.net...
> ddwyer wrote:
> [snip]
> >>Don Lancaster <don@tinaja.com> wrote in message
> >>news:3E7E517D.2BB1B17A@tinaja.com...
>
> >>>Tarmo Tammaru wrote:
>
> >>>>You realize that nobody under the age of 60 knows what a chopper
> >>>>amplifier is?
> [snip]
>
> >>>Please visit my GURU's LAIR web site at http://www.tinaja.com
>
> > No-ones mentioned mercury wetted ....sexy or what?
>
> Nowadays, if you mention the word mercury, the environmental police will
> come out and quarantine your area and abate the toxic waste. :-P

Now, what did I do with that vial of mercury? I just can't remember... OOPS!

>
>
>
> --
> ----------------(from OED Mini-Dictionary)-----------------
> PUNCTUATION - Apostrophe
> Incorrect uses: (i) the apostrophe must not be used with a plural
> where there is no possessive sense, as in ~tea's are served here~;
> (ii) there is no such word as ~her's, our's, their's, your's~.
>
> Confusions: it's = it is or it has (not 'belonging to it'); correct
> uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
> but ~the dog wagged its tail~ (no apostrophe).
> ----------------(For the Apostrophe challenged)----------------
> From a fully deputized officer of the Apostrophe Police!
>
```

2365. RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 07:24:31 UTC
From: john <johnkrac@ja.com>
Message-ID: <PGxga.319885$na.22740015@news2.calgary.shaw.ca>
Source record: 36568
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hey guys....

I have some logging equipment that I'd like to make a "stand-alone"
display/terminal for.
At the moment a pc/laptop has to be plugged in to the equipment and a
terminal program is ran to view the data.

I'd like to build a display that will receive the data in to bins and then
display on to either led/lcd screen (led easier to start maybe).

Looking at things....I think I need to use a UART 16550. Which, correct me
if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that in
to a buffer/register/sequencer....basically store the info (how would I
step/clock this in).
Then I could take the byte word and parallel output it to display drivers
w/buffers and display the data until things are updated again.

Thanks

2366. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 08:02:47 UTC
From: Ben Pope <b_pope@hotREMOVE_MEmail.com>
Message-ID: <nfyga.698$aF5.420@newsfep1-gui.server.ntli.net>
Source record: 36569
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

john wrote:
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and
> then display on to either led/lcd screen (led easier to start maybe).

Depends... if you get an LCD with a controller, it can be easier than an LED display.

> Looking at things....I think I need to use a UART 16550. Which,
> correct me if I'm wrong, converts rs232 to TTL....then I'm guessing I
> could put that in to a buffer/register/sequencer....basically store
> the info (how would I step/clock this in).
> Then I could take the byte word and parallel output it to display
> drivers w/buffers and display the data until things are updated again.

The UART converts parallel to serial and back.

A line driver converts levels.

Ben
--
I'm not just a number. To many, I'm known as a string...

2367. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 08:03:11 UTC
From: Brian Lodahl <lodahl@kom.auc.dk>
Message-ID: <b5ubct$d0p$1@sunsite.dk>
Source record: 36570
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi,

My FT-50 is an early model, and the battery is probably just as old.... so I hope that they haven't glued it too much...
In detail - how do you open it ? I thought about running a knife or so along the assembly edge all the way around and then try to get a screwdriver or similar inside.... is that the procedure ?

I did a bit of surfing around to find alternatives to replacing the cells..... take a look at this:

http://www.mahaenergy.com/products/radios/nimhbp/yaesu/index.htm

One question comes into my mind: These battery packs - the cells inside - are they type AA or type AAA ? -it seems to me that the slim outline of the pack might not be wide enough for a type AA cell ?

If they really are AA, it seems that I can build a new battery pack on just about the same capacity for somewhere around 2/3rd of the price, at least when I convert it into Danish currency and account for overseas shipping...
-But as you mentioned, Leon, I might need to add a new charger circuit to make really good.

73 de OZ2BRN
Brian

"John Moriarity" <k6qq@hdo.net> wrote in message
news:v8589sdl4qa3ce@corp.supernews.com...
> > > Does anyone have any experience in opening the battery case for this
> > > particular type of battery?
>
> > Haven't tried it myself, but I've heard that putting the battery pack in
a
> > freezer for an hour or so weakens the joints, enabling it to be easily
> > opened.
> >
> > Leon
> > --
> > Leon Heller, G1HSM
>
> I've done it several times to FNB-4A packs. Freezing helps,
> but in the newest of my packs, Yaesu used a *lot* more
> glue, making it very difficult to open without slight damage.
> Maybe they want to discourage replacement of the pack?
>

> My experience with the NiMH cells is that they self-discharge
> *much* faster than NiCd batteries. Also, it seems that they
> are a bit more fussy about charging. Maxim makes several
> chips specifically for NiMH batteries, and I may build up a
> charger using one.
>
> 73, John - K6QQ
>
>

2368. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 08:40:05 UTC
From: Joseph Casey <long.distance@man>
Message-ID: <3E82B8E5.8030205@man>
Source record: 36571
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

>
> Looking at things....I think I need to use a UART 16550. Which, correct me
> if I'm wrong, converts rs232 to TTL....

The 16550 handles the RS232 protocol. You need an additional chip to
convert rs232 voltage levels (typically +/- 12V) to TTL. In the old days
the 75188/75189 chips were used. Nowadays chips such as MAX202 are used
because they have their own +/-12V generator.

then I'm guessing I could put that in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.
>
>

The 16550 has a 16 byte fifo (first in - first out) buffer for incoming
data. You will need to configure the 16550 by initializing 10 or so
internal registers. This is best done by a microprocessor. Otherwise you
will need a forest of TTL chips to do it!

This would be a good project for learning microcontroller design. Get a
low cost microcontoller evaluation board and write the terminal program.
Select one with an RS232 interface. Some of them have a built in display.

2369. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 08:44:34 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5udlh$5dv$2@hercules.btinternet.com>
Source record: 36572
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"john" <johnkrac@ja.com> wrote in message
news:PGxga.319885$na.22740015@news2.calgary.shaw.ca...
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and then
> display on to either led/lcd screen (led easier to start maybe).
>
> Looking at things....I think I need to use a UART 16550. Which, correct
me
> if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that
in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.

You can buy LCD displays with an attached uC (PIC usually) which take in
RS-232 and display the data. They are quite cheap.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2370. Re: Transformer wire ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 08:44:35 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b5udli$5dv$3@hercules.btinternet.com>
Source record: 36573

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:18f48vsnelf03gvikiupp5370q5bieshfq@4ax.com...
> what is the purpose of that screen?

It should be grounded, and goes between the mains winding and the others.
It's partly for safety reasons, and to reduce noise from the mains supply.
They don't seem to be very common.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2371. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 10:14:52 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <b5uh3l$5n8$1@news1.kornet.net>
Source record: 36574
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Once frozen, just a sharp rap on the kitchen counter/workbench will open
them. The cells are 2/3 AA cells, oddball size.. but readily available.

"Brian Lodahl" <lodahl@kom.auc.dk> wrote in message
news:b5ubct$d0p$1@sunsite.dk...
> Hi,
>
> My FT-50 is an early model, and the battery is probably just as old.... so
I
> hope that they haven't glued it too much...
> In detail - how do you open it ? I thought about running a knife or so
> along the assembly edge all the way around and then try to get a
screwdriver
> or similar inside.... is that the procedure ?
>
> I did a bit of surfing around to find alternatives to replacing the
> cells..... take a look at this:
>
> http://www.mahaenergy.com/products/radios/nimhbp/yaesu/index.htm
>
> One question comes into my mind: These battery packs - the cells inside -
> are they type AA or type AAA ? -it seems to me that the slim outline of
the
> pack might not be wide enough for a type AA cell ?
>
> If they really are AA, it seems that I can build a new battery pack on
just
> about the same capacity for somewhere around 2/3rd of the price, at least
> when I convert it into Danish currency and account for overseas
shipping...
> -But as you mentioned, Leon, I might need to add a new charger circuit to
> make really good.
>
> 73 de OZ2BRN
> Brian
>
>
>
>
>
>
> "John Moriarity" <k6qq@hdo.net> wrote in message
> news:v8589sdl4qa3ce@corp.supernews.com...

> > > > Does anyone have any experience in opening the battery case for this
> > > > particular type of battery?
> >
> > > Haven't tried it myself, but I've heard that putting the battery pack
in
> a
> > > freezer for an hour or so weakens the joints, enabling it to be easily
> > > opened.
> > >
> > > Leon
> > > --
> > > Leon Heller, G1HSM
> >
> > I've done it several times to FNB-4A packs. Freezing helps,
> > but in the newest of my packs, Yaesu used a *lot* more
> > glue, making it very difficult to open without slight damage.
> > Maybe they want to discourage replacement of the pack?
> >
> > My experience with the NiMH cells is that they self-discharge
> > *much* faster than NiCd batteries. Also, it seems that they
> > are a bit more fussy about charging. Maxim makes several
> > chips specifically for NiMH batteries, and I may build up a
> > charger using one.
> >
> > 73, John - K6QQ
> >
> >
>
>

2372. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 10:27:08 UTC
From: Roger Hamlett <rogerspamignored@ttelmah.demon.co.uk>
Message-ID: <1tAga.766$7V3.190@newsfep4-winn.server.ntli.net>
Source record: 36575
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"john" <johnkrac@ja.com> wrote in message
news:PGxga.319885$na.22740015@news2.calgary.shaw.ca...
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and then
> display on to either led/lcd screen (led easier to start maybe).
>
> Looking at things....I think I need to use a UART 16550. Which, correct
me
> if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that
in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.
Seriously, there will be quite a lot of work in doing this. If you think
(for instance), of a small 8 character display, then for even simple 'seven
segment' displays, you will need to interwire the 56 control connections,
and the eight power lines, then have a character select (3-8 line decoder),
plus the individual segment selects (giving ten control wired), which you
then feed from the receiving circuit.
Much simpler (and cheaper!), to use a 'smart' display that has all the
electronics built in. Typical LCD examples are at:
http://www.crystalfontz.com/products/index-ser.html
LED versions exist as well, but nowadays the LCD versions (because of the
numbers involved), tend to be cheaper.

Best Wishes

2373. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 11:15:58 UTC
From: Brian Lodahl <lodahl@kom.auc.dk>
Message-ID: <b5ummc$226$1@sunsite.dk>
Source record: 36576
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Great ! Thanks for the good news. I was a bit worried about having to cut it... not so much as my fingers being in danger but more of destroying the casing :-)

73 de OZ2BRN
Brian

"Brenda Ann" <brendad@shinbiro.com> wrote in message
news:b5uh3l$5n8$1@news1.kornet.net...
> Once frozen, just a sharp rap on the kitchen counter/workbench will open
> them. The cells are 2/3 AA cells, oddball size.. but readily available.
>
>
> "Brian Lodahl" <lodahl@kom.auc.dk> wrote in message
> news:b5ubct$d0p$1@sunsite.dk...
> > Hi,
> >
> > My FT-50 is an early model, and the battery is probably just as old....
so
> I
> > hope that they haven't glued it too much...
> > In detail - how do you open it ? I thought about running a knife or so
> > along the assembly edge all the way around and then try to get a
> screwdriver
> > or similar inside.... is that the procedure ?
> >
> > I did a bit of surfing around to find alternatives to replacing the
> > cells..... take a look at this:
> >
> > http://www.mahaenergy.com/products/radios/nimhbp/yaesu/index.htm
> >
> > One question comes into my mind: These battery packs - the cells
inside -
> > are they type AA or type AAA ? -it seems to me that the slim outline of
> the
> > pack might not be wide enough for a type AA cell ?
> >
> > If they really are AA, it seems that I can build a new battery pack on
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> > about the same capacity for somewhere around 2/3rd of the price, at
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> > when I convert it into Danish currency and account for overseas
> shipping...
> > -But as you mentioned, Leon, I might need to add a new charger circuit

to
> > make really good.
> >
> > 73 de OZ2BRN
> > Brian
> >
> >
> >
> >
> >
> >
> > "John Moriarity" <k6qq@hdo.net> wrote in message
> > news:v8589sdl4qa3ce@corp.supernews.com...
> > > > > > Does anyone have any experience in opening the battery case for
this
> > > > > particular type of battery?
> > >
> > > > > Haven't tried it myself, but I've heard that putting the battery
pack
> in
> > a
> > > > > freezer for an hour or so weakens the joints, enabling it to be
easily
> > > > opened.
> > > >
> > > > Leon
> > > > --
> > > > Leon Heller, G1HSM
> > >
> > > I've done it several times to FNB-4A packs. Freezing helps,
> > > but in the newest of my packs, Yaesu used a *lot* more
> > > glue, making it very difficult to open without slight damage.
> > > Maybe they want to discourage replacement of the pack?
> > >
> > > My experience with the NiMH cells is that they self-discharge
> > > *much* faster than NiCd batteries. Also, it seems that they
> > > are a bit more fussy about charging. Maxim makes several
> > > chips specifically for NiMH batteries, and I may build up a
> > > charger using one.
> > >
> > > 73, John - K6QQ
> > >
> > >
> >
> >
>
>

2374. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 11:47:47 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuilxc7w.fld@barrow.com>
Source record: 36577
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"john" <johnkrac@ja.com> wrote:
>Hey guys....
>
>I have some logging equipment that I'd like to make a "stand-alone"
>display/terminal for.
>At the moment a pc/laptop has to be plugged in to the equipment and a
>terminal program is ran to view the data.
>
>I'd like to build a display that will receive the data in to bins and then
>display on to either led/lcd screen (led easier to start maybe).

I'm not clear here on just what you mean by "display". If you
just want to put raw data on a screen, byte by byte as it comes
from the equipment, that is one thing. If you want to show what
that data is in some kind of an orderly fashion, such as combine
multibyte binary integers into a single decimal number or put
numbers into specific columns, things get significantly complex.

>Looking at things....I think I need to use a UART 16550. Which, correct me
>if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that in
>to a buffer/register/sequencer....basically store the info (how would I
>step/clock this in).
>Then I could take the byte word and parallel output it to display drivers
>w/buffers and display the data until things are updated again.

Others have pointed out the additional hardware required to
accomplish the minimal functionality, and a couple answers have
hinted or outright suggested that a microprocessor and custom
software are required. I don't think that requirement was made
clear enough.

To do anything other than just display raw data byte by byte as
it comes in scrolling from one side of an LCD screen to the
other, you need a microprocessor. One (good) suggestion (if you
have experience or want to get some in programming embedded
devices) is a low cost microprocessor evaluation board. Just be
aware that the complexity involved, if you have no experience at
that level with hardware or software development, is *huge*.

On the other hand, there _are_ hardware devices available which
can _easily_ be adapted to do whatever level of complexity you
want. It might need only one, or it might require two of them
them.

The first item needed is an older (read that as inexpensive) model of laptop! Even the oldest and least useful ones are capable of doing what you need.

The second item may or may not be necessary, depending on what you will settle for in a display. If the screen on the laptop will not suit your needs (it doesn't "panel mount" very well!), you can get an LCD display that the laptop can drive through its parallel port (if the laptop has two serial ports, a serial port display could be used instead, but many laptops only have a single serial port and that will be needed for connection the logging equipment). Others mentioned Crystalfontz LCD displays, and I would also recommend them. They have serial and parellel devices, and they have both simple ascii text displays and graphics displays. See <http://www.crystalfontz.com>.

The benefits of using an old laptop are that you can use whatever OS you are familiar with (Linux is *highly* recommended), and whatever programming environement you either know or are willing to learn (the whole thing can be done with shell scripts if you want, but could also be developed with almost any compiled language). A little thought might lead to other useful things that can be done, such as log reports. The little laptop can save log data for some period of time and then summarize it and produce reports that include almost any kind of analysis you might find useful.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2375. Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 12:02:30 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5up5q$2dbgcq$1@ID-150848.news.dfncis.de>
Source record: 36578
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi. Just wondering if anyone out there has changed the original Drake RX 1st IF filter and therefore has one available. Am musing over the idea of whether to use this filter in my RX.

If you have the a filter perhaps you could just drop me a post, then I can know if I can get hold of this filter. Please indicate what you might be wanting for it (hopefully cheap) :c).

My email:

news_email@REMOVEntlworld.com

Please remove "REMOVE".

Anyone have the specs for this filter? I know it's about 8 Khz bandwidth. I don't know terminating impedances.

TIA. Rich.

2376. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 12:50:00 UTC
From: g9u5dd43_nospam@yahoo.com
Message-ID: <3e82f338.3031539@news2.news.adelphia.net>
Source record: 36579
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Check out Scott Edwards LCD and VFD online
http://www.seetron.com/

- - - - - -

2377. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 15:18:22 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87of3wyh1d.fld@barrow.com>
Source record: 36580
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote:
>Hi. Just wondering if anyone out there has changed the original
>Drake RX 1st IF filter and therefore has one available. Am
>musing over the idea of whether to use this filter in my RX.

That filter is generally thought to be the biggest impediment
to the stock R4C being a good receiver. I would assume it was
a marketing decision, intended to make it more attractive by
lowering the price.

If you are not going to market your receiver, you probably don't
want to use that particular filter!

Instead, either watch eBay for one of the replacement filters,
or you might look into some of the AM filters for other receivers.

A quick search in eBay came up with current examples:

6 kHz / 5.645 mHz for Drake R4C
6 kHz / 9.010 mHz for ICOM
6 kHz / 3.180 mHz for Yaesu FT-101

A search of past auctions gives an idea of prices:

6 kHz / 5.645 mHz for Drake TR-7 $ 90.00
6 kHz / 5.645 mHz for Drake TR-7 87.00
6 kHz / 5.645 mHz for Drake TR-7 84.99
6 kHz / 5.645 mHz for Drake R4C 111.05
6 kHz / 5.645 mHz for Drake R4C 102.50
6 kHz / 8.830 mHz for Kenwood TS-430S 62.00
6 kHz / 8.830 mHz for Kenwood TS-430S 65.00

A google search came up with other examples:

8 kHz / 5.645 mHz for Drake TR-7

Plus of course there are the commonly available 6 kHz and 8 kHz
replacement filters for the R4C available for about $105 each
from INRAD.

And you might want to consider more than one filter and
switching between them. Both the 8 kHz and 6 kHz filters are
wider than necessary for SSB or CW and using switchable narrower
filters is probably a *much* preferable system from a
performance point of view. The only benefits to using the
wide filter early in the IF chain are 1) lower cost compared to
switching filters, 2) transient response for the Noise Blanker,

and 3) passband tuning of the entire second filter bandwidth.
If you don't need 2 or 3, the cost of switching between narrower
filters is probably worth the performance gain for a one time
only receiver project.

If you go with narrow filters, Ten-Tec uses filters at 9001.5
and 6298.5 kHz, Heathkit used HF filters, and I suppose there
are many many others.. INRAD, for example, sells a 2.8 kHz
filters that could be followed by almost any of the common
narrower (2.4, 2.3, 2.1, 1.8 etc.) filters. For CW a 600 Hz
filter can be used in front of a 600 Hz filter, or use 500/400,
400/300, or 300/250 combinations depending on what you can find.

Most of the INRAD filters have information available on them
at <http://www.qth.com/INRAD/>, and they list the frequencies
of various replacement filters which can be used sometimes to
identify less than well described used filters found for sale
in other places.

>If you have the a filter perhaps you could just drop me a post,
>then I can know if I can get hold of this filter. Please
>indicate what you might be wanting for it (hopefully cheap) :c).

With filters though, you are going to get what you pay for. If
it will do you well enough, INRAD has $24 filters too. :-)

<http://www.qth.com/INRAD/exp_filt.htm>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2378. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 16:15:33 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b5v7vv$4n0e$1@ID-150848.news.dfncis.de>
Source record: 36581
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Floyd Davidson" <floyd@ptialaska.net> wrote in message
news:87of3wyh1d.fld@barrow.com...
> "Richard" <nearlynews_email@ntlworld.com> wrote:
> >Hi. Just wondering if anyone out there has changed the
original
> >Drake RX 1st IF filter and therefore has one available. Am
> >musing over the idea of whether to use this filter in my RX.
>
> That filter is generally thought to be the biggest impediment
> to the stock R4C being a good receiver. I would assume it was
> a marketing decision, intended to make it more attractive by
> lowering the price.
>
> If you are not going to market your receiver, you probably
don't
> want to use that particular filter!
>
> Instead, either watch eBay for one of the replacement filters,
> or you might look into some of the AM filters for other
receivers.
>
> A quick search in eBay came up with current examples:
>
> 6 kHz / 5.645 mHz for Drake R4C
> 6 kHz / 9.010 mHz for ICOM
> 6 kHz / 3.180 mHz for Yaesu FT-101
>
> A search of past auctions gives an idea of prices:
>
> 6 kHz / 5.645 mHz for Drake TR-7 $ 90.00
> 6 kHz / 5.645 mHz for Drake TR-7 87.00
> 6 kHz / 5.645 mHz for Drake TR-7 84.99
> 6 kHz / 5.645 mHz for Drake R4C 111.05
> 6 kHz / 5.645 mHz for Drake R4C 102.50
> 6 kHz / 8.830 mHz for Kenwood TS-430S 62.00
> 6 kHz / 8.830 mHz for Kenwood TS-430S 65.00
>
> A google search came up with other examples:
>
> 8 kHz / 5.645 mHz for Drake TR-7
>
> Plus of course there are the commonly available 6 kHz and 8 kHz
> replacement filters for the R4C available for about $105 each

> from INRAD.

I spent about $160 for the Yaesu 50 line, that is FL50B, FR50B, FV50B. It is a budget system really, but quite good. A beginners set. However, I'm trying to spend not very much at all improving 2nd mixer cross mod as well as improving the main selectivity (acheived at 455 Khz, 2nd IF). Heck I only paid $160 for the entire set-up! :c)

I've thought the filter to help stop the 2nd mixer from cross modulation needs to be 8 Khz wide. Such a filter will pass SSB/CW/AM, the real bandpass shaping takng place at the 2nd IF. But, actually, maybe I could go with a 6 Khz filter. For some reason the filter to "protect" mixer cross mod in the Drake RX's is 8khz wide, and I've taken my cue from this fact.

I think using a wide filter in the 1st IF would allow for passband tuning as you mention below. And I was thinking about arranging for passband tuning. I was hoping to have a good SSB and a CW filter in the 2nd IF.

The Drake filter would improve things, maybe I could get one really cheap, but would it do the job. That I don't know. Bit of a risk maybe, but if I could get one cheap maybe it's worth the risk.

Might actually be best making my own filter, but will look at "store bought" for a while.

> And you might want to consider more than one filter and
> switching between them. Both the 8 kHz and 6 kHz filters are
> wider than necessary for SSB or CW and using switchable
narrower
> filters is probably a *much* preferable system from a
> performance point of view. The only benefits to using the
> wide filter early in the IF chain are 1) lower cost compared to
> switching filters, 2) transient response for the Noise Blanker,
> and 3) passband tuning of the entire second filter bandwidth.
> If you don't need 2 or 3, the cost of switching between
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> filters is probably worth the performance gain for a one time
> only receiver project.
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> If you go with narrow filters, Ten-Tec uses filters at 9001.5
> and 6298.5 kHz, Heathkit used HF filters, and I suppose there
> are many many others.. INRAD, for example, sells a 2.8 kHz
> filters that could be followed by almost any of the common
> narrower (2.4, 2.3, 2.1, 1.8 etc.) filters. For CW a 600 Hz
> filter can be used in front of a 600 Hz filter, or use 500/400,
> 400/300, or 300/250 combinations depending on what you can
find.
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> Most of the INRAD filters have information available on them
> at <http://www.qth.com/INRAD/>, and they list the frequencies
> of various replacement filters which can be used sometimes to
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> >If you have the a filter perhaps you could just drop me a
post,
> >then I can know if I can get hold of this filter. Please
> >indicate what you might be wanting for it (hopefully cheap)
:c).
>
> With filters though, you are going to get what you pay for. If
> it will do you well enough, INRAD has $24 filters too. :-)
>
> <http://www.qth.com/INRAD/exp_filt.htm>

Yes, I've been doing some research and I see the INRAD filters.
I'm busy now compiling a list of filters.

Thanks for the info on prices. I'll keep searching Ebay and see
what comes up and for what price it sells for.

2379. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 16:47:21 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <3E832B00.6050500@alltel.net>
Source record: 36582
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

If you just want to free up the laptop,
I've got a few unused Wyse WY520A ANSI terminals with unused
keyboards that I'm selling cheap.
It's an excellent terminal and I use one for console on my
unix boxes and another in the shop.
$99 includes shiping in 48 contiguous states.

Emulation mode support:
DEC
VT52 VT-52
VT100 VT-100
VT300 VT-300
VT400 VT-400
DEC-PCTerm
Wyse
WY85 WY-85
WY60 WY-60
Wyse-PCTerm pcterm
Unix console

I have a few on ebay from time to time as well if that's your preferred
venue.
http://cgi6.ebay.com/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=bob%40atl.org

here is a pix at wyse with some description.
the -A is amber.

http://www.wyse.com/products/gpt/wy520es.htm

73
-Bob
ah7i

john wrote:
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and then
> display on to either led/lcd screen (led easier to start maybe).
>
> Looking at things....I think I need to use a UART 16550. Which, correct me

> if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.
>
> Thanks
>
>

2380. Re: new NiMh cells in FT-50 Battery FNB41... experiences, anyone??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 19:31:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v86kcg431ghoe0@corp.supernews.com>
Source record: 36583
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I don't think I've seen anyone here mention the differences in charging requirements for NiCd and NiMH batteries. The chief difference is that NiCds can tolerate relatively long periods of overcharge, provided that the current is limited to about C/10 (e.g., 80 mA for an 800 mAh cell). While it's not good practice to leave them charging indefinitely, they aren't appreciably harmed by overcharge for fairly long periods. This makes NiCd cells convenient for appliances like, say, a battery operated vacuum cleaner, where a very simple and inexpensive charger can be plugged in for extended periods without worry about the battery's state of charge.

NiMH cells don't have this tolerance. Overcharging NiMH cells shortens their life considerably. In my one encounter with engineers from a manufacturer, the exact amount of life reduction wasn't clear -- apparently it depends a lot on the overcharge regimen. But all manufacturers of NiMH cells specifically recommend against overcharging them. If your rig comes with a simple-minded charger with no overcharge control, you're likely to see shortened battery life if you consistently allow the batteries to overcharge. Ideally, you should use a modern charger which detects when the battery reaches full charge, then terminates or drops back to a very low trickle charge rate (C/30 to C/50). Many brands and varieties are available now -- the ones made by Maha can accommodate the varying number of cells you'll find in HT battery packs, and I'm sure others have this capability.

My own experience with self discharge seems to agree with what the manufacturers say -- it's approximately the same as for NiCds. You can find good detailed information at the manufacturers' web sites.

Oh, one other difference is that in general, NiCds retain their capacity better than NiMHs at extremely high discharge rates. This would probably include the current consumed by an HT when transmitting at maximum power. However, people I've talked to who've used NiMH batteries in an HT tell me that the increased nominal capacity of the NiMH cells more than makes up the difference. Even if you might not get quite a proportional advantage when transmitting, you still come out ahead. And you should get the full capacity difference advantage when receiving, which is where most HTs spend most of their time.

Roy Lewallen, W7EL

2381. LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 19:59:59 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <o5m68vgddkcmec2ikcacgrl6c2bpernbd0@4ax.com>
Source record: 36584

Anybody ever dealt with the cheap LCR meters versus the older genrad type bridges? If so, how do they compare? Can you get good accurate readings on the digital meters? Even on very low readings such as 4 or 5 picofarads?

Tracy
Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2382. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 20:55:40 UTC
From: Skipp says vote Moderate Republican <pokefunseriously@yahoo.com>
Message-ID: <b5vogc$2k9$1@woodrow.ucdavis.edu>
Source record: 36585

It's easy to measure capacitance, not so easy to determine if the
capacitor works as rated because the C Value is one one part of the
picture.

But a good LCR meter should get you something practical down to 2 or 3 pf.
I have a Sencore LC-102 that does really well.

cheers
skipp
http://sonic.ucdavis.edu

: Tracy Fort <beerbarrel@cox.net> wrote:
: Anybody ever dealt with the cheap LCR meters versus the older genrad
: type bridges? If so, how do they compare? Can you get good accurate
: readings on the digital meters? Even on very low readings such as 4 or
: 5 picofarads?

: Tracy
: Tracy Fort

: KE4ODD

: beerbarrel@cox<NOSPAM>.net

: remove <NOSPAM> for repliess

2383. Re: antenna tuning question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 22:05:20 UTC
From: mcalhoun@ksu.edu
Message-ID: <b5vsj0$mp2@unix1.cc.ksu.edu>
Source record: 36586

>>while doing research on mobile antennas for my automobile, the thought has
>>occurred to me that it was theoritcally possible to tune an antenna using
>>a permeability tuned coil much like using a permeability tuned vfo.
>>....[snip]....

>....[snip]....
>The arguemnt of needing "infinite" variablility via analog tuning has no
>good argument since the actual tuning of nearly all AATs, analog or digital,
>is broad enough that fine resolution is not "seen" by any antenna tuner.
>....[snip]....

For some 20 years or so my "standard" homebrew antenna tuner (even when
operating mobile) has consisted of one variable capacitor, an inductor,
and two alligator clips (^ represents the alligator clips):

```
INPUT -----X-----LLLLLLLLLLLL
^ ^
| +---Y-------
C to
| antenna
GROUND------------+------------------
```

My home antennas are usually wide-band enough that I can connect the
alligator clips to every OTHER turn, but my mobile antennas are so
narrow that I could not get acceptable SWR connecting to EVERY turn,
so I added small variable capacitors at points X and Y to essentially
give an "infinite" number of turns. The resulting tuner makes the
cab of my pick-up look a little like a grade-B movie, but the AT works
like a charm, and I can usually do small QSY's by tweaking only one or
two knobs.

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2384. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 22:10:52 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <1tt68vsqvp5985b8f3bpvo2q214us9l0mo@4ax.com>
Source record: 36587

Thats what I needed to know...I'm more interested in being able to
check components values at ham fests and such....

thanks

On Thu, 27 Mar 2003 20:55:40 +0000 (UTC), Skipp says vote Moderate
Republican <pokefunseriously@yahoo.com> wrote:

>It's easy to measure capacitance, not so easy to determine if the
>capacitor works as rated because the C Value is one one part of the
>picture.
>
>But a good LCR meter should get you something practical down to 2 or 3 pf.
>I have a Sencore LC-102 that does really well.
>
>cheers
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>http://sonic.ucdavis.edu
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>: Tracy Fort <beerbarrel@cox.net> wrote:
>: Anybody ever dealt with the cheap LCR meters versus the older genrad
>: type bridges? If so, how do they compare? Can you get good accurate
>: readings on the digital meters? Even on very low readings such as 4 or
>: 5 picofarads?
>
>: Tracy
>: Tracy Fort
>
>: KE4ODD
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>: beerbarrel@cox<NOSPAM>.net
>
>: remove <NOSPAM> for repliess

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2385. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 22:31:53 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87el4sxwyu.fld@barrow.com>
Source record: 36588
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote:
>
>I spent about $160 for the Yaesu 50 line, that is FL50B, FR50B,
>FV50B. It is a budget system really, but quite good. A
>beginners set. However, I'm trying to spend not very much at all
>improving 2nd mixer cross mod as well as improving the main
>selectivity (acheived at 455 Khz, 2nd IF). Heck I only paid $160
>for the entire set-up! :c)

OK, now I've got a better idea what you are doing!

I did a web search looking for a manual for the receiver, and
didn't find anything. Do you know of an online description or
manual that gives details on the IF and mixer schemes?

>I've thought the filter to help stop the 2nd mixer from cross
>modulation needs to be 8 Khz wide. Such a filter will pass
>SSB/CW/AM, the real bandpass shaping takng place at the 2nd IF.
>But, actually, maybe I could go with a 6 Khz filter. For some
>reason the filter to "protect" mixer cross mod in the Drake RX's
>is 8khz wide, and I've taken my cue from this fact.

In the Drake design the 1st IF filter has to be at least twice
as wide as the widest 2nd IF filter because there is only one
1st IF filter and it has to pass _both_ sidebands, only one of
which is selected by the 2nd IF filter, but since either of them
could be, they both have to be there. The actual width has to
be a little wider than that because, or at least I think it is
because, the noise blanker's gate is after the filter instead of
before it.

Hence, you don't necessarily have the same design criteria that
Drake did (though it is entirely possible that in fact you will
end up with the same requirements).

>I think using a wide filter in the 1st IF would allow for
>passband tuning as you mention below. And I was thinking about
>arranging for passband tuning. I was hoping to have a good SSB
>and a CW filter in the 2nd IF.

But you also (as is obvious from the commonly derogatory
comments about the original Drake filter) want to have
selectivity as early as possible. The difference may or may not
affect you though. For example, sitting here at the top of the
world I don't exactly have to pick signals out of a crowded

band. I hear more auroral buzz than I do QRM from the one other ham in town that operates HF. Maybe the tighter specs on a roofing filter rarely do me any good at all! :-)

But for someone near an urban center (particularly if they are "smart" and found a great location at the highest elevation around) that extra 20 to 40 dB of floor on a good filter will be the difference between ability to get into DX pileups or operate contests, or not.

>The Drake filter would improve things, maybe I could get one
>really cheap, but would it do the job. That I don't know. Bit
>of a risk maybe, but if I could get one cheap maybe it's worth
>the risk.

One advantage to doing it that way is the low expense of testing your theory... and if it works but needs a better filter _then_ you can spend the money on a drop in replacement. Anything else you do won't be a drop in replacement so much as a total (ouch) redesign...

>Might actually be best making my own filter, but will look at
>"store bought" for a while.

It's one of those "variables", that goes into the entire juggling act. :-) There are tradeoffs...

>Thanks for the info on prices. I'll keep searching Ebay and see
>what comes up and for what price it sells for.

Hmmm... I don't see very many "cheap" filters on eBay, or anywhere else. They all seem to go for premium rates. Buying two filters would more than double your investment! But that might be just the way to go.

Here are some thoughts:

If you don't need AM, you don't need anything wider than just more than twice your SSB filter bandwidth.

If you don't use the same passband tuning design that Drake did, you probably don't need a 1st IF filter to handle two sidebands. I don't find the passband tuning to be very useful for SSB, but for RTTY and CW it is essential. Which suggests that perhaps a 3.0 kHz 1st IF filter would be just fine, even though it would provide only slight adjustment of the passband on SSB. (Hmmm... maybe I should try that myself!)

Also, you can set up a passband tuning system that uses only two filters one at the 1st IF and one in the 2nd IF, that are offsetting as the passband is tuned, thus giving you variable bandwidth with only two filters. I previously posted a description of the most versatile way that could be done, but it could also be done using only the passband tuning to also

control the offset between the two filters and thus the bandwidth. (It could also be done using only 2 IF's but then the "center frequency" changes as things get tuned.)

I take it you are going to replace all of the oscillators and mixers, hence the entire frequency scheme is up for grabs as part of this project? (Find either a Collins PTO or a Drake PTO, you'll be lots happier with the stability.) I really do like the basic scheme that Drake used, but it requires some very careful attention to detail for the AGC too. In particular the RF and 1st mixer need to have good dynamic range and appropriate AGC to keep the signal levels under control before they hit the later mixer stages. (That's why they used a remote cutoff tube, the 6BA6, for the RF stage instead of a sharp cutoff that is so commonly seen.)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2386. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 23:37:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b601s9$e8ku$1@ID-150848.news.dfncis.de>
Source record: 36589
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Floyd Davidson" <floyd@ptialaska.net> wrote in message
news:87el4sxwyu.fld@barrow.com...
> "Richard" <nearlynews_email@ntlworld.com> wrote:
> >
> >I spent about $160 for the Yaesu 50 line, that is FL50B,
FR50B,
> >FV50B. It is a budget system really, but quite good. A
> >beginners set. However, I'm trying to spend not very much at
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> >improving 2nd mixer cross mod as well as improving the main
> >selectivity (acheived at 455 Khz, 2nd IF). Heck I only paid
$160
> >for the entire set-up! :c)
>
> OK, now I've got a better idea what you are doing!
>
> I did a web search looking for a manual for the receiver, and
> didn't find anything. Do you know of an online description or
> manual that gives details on the IF and mixer schemes?

I have the schematic on my PC.

> >I've thought the filter to help stop the 2nd mixer from cross
> >modulation needs to be 8 Khz wide. Such a filter will pass
> >SSB/CW/AM, the real bandpass shaping takng place at the 2nd
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> >But, actually, maybe I could go with a 6 Khz filter. For some
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> as wide as the widest 2nd IF filter because there is only one
> 1st IF filter and it has to pass _both_ sidebands, only one of
> which is selected by the 2nd IF filter, but since either of
them
> could be, they both have to be there. The actual width has to
> be a little wider than that because, or at least I think it is
> because, the noise blanker's gate is after the filter instead
of
> before it.

Actually, with the FR50B, if you only want to receive LSB on
80/40, and USB on 20/15/10 that 1st IF filter can be less than 8

Khz. You only need 8 Khz if on any particular band you want to switch sidebands and you don't alter the VFO frequency. (You don't really want to alter the VFO if a station went from USB to LSB). So, I'd say a 6Khz filter would be okay. Because of frequency translation being different for 80/40 and for 20/15/10, LSB (8/40) and USB (20.15/10) sidebands always land within the 3 Khz filter passband at 455Khz. Switching sidebands on a particular band would call for two SSB filiters at 455 Khz, or alteration of the 2nd mixer xtal osc frequency. I intend to alter the 2nd mixer xtal osc to cater for CW. To put the CW carrier on 455 Khz, rather than just off the centre frequency as with SSB.

> Hence, you don't necessarily have the same design criteria that
> Drake did (though it is entirely possible that in fact you will
> end up with the same requirements).
>
> >I think using a wide filter in the 1st IF would allow for
> >passband tuning as you mention below. And I was thinking about
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> "smart" and found a great location at the highest elevation
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> Hmmm... I don't see very many "cheap" filters on eBay, or
> anywhere else. They all seem to go for premium rates. Buying
> two filters would more than double your investment! But that
> might be just the way to go.
>
> Here are some thoughts:
>
> If you don't need AM, you don't need anything wider than just
> more than twice your SSB filter bandwidth.

Or not even that if you stick to LSB on 80/40, USB on 20/15/10.

>
> If you don't use the same passband tuning design that Drake
did,
> you probably don't need a 1st IF filter to handle two
sidebands.
> I don't find the passband tuning to be very useful for SSB, but
> for RTTY and CW it is essential. Which suggests that perhaps a
> 3.0 kHz 1st IF filter would be just fine, even though it would
> provide only slight adjustment of the passband on SSB.
(Hmmm...
> maybe I should try that myself!)

I bet I could get away with say a 4 Khz filter.

> Also, you can set up a passband tuning system that uses only
two
> filters one at the 1st IF and one in the 2nd IF, that are
> offsetting as the passband is tuned, thus giving you variable
> bandwidth with only two filters. I previously posted a
> description of the most versatile way that could be done, but
it
> could also be done using only the passband tuning to also

> control the offset between the two filters and thus the
> bandwidth. (It could also be done using only 2 IF's but then
the
> "center frequency" changes as things get tuned.)
>
> I take it you are going to replace all of the oscillators and
> mixers, hence the entire frequency scheme is up for grabs as
> part of this project? (Find either a Collins PTO or a Drake
> PTO, you'll be lots happier with the stability.) I really do
> like the basic scheme that Drake used, but it requires some
very
> careful attention to detail for the AGC too. In particular the
> RF and 1st mixer need to have good dynamic range and
appropriate
> AGC to keep the signal levels under control before they hit the
> later mixer stages. (That's why they used a remote cutoff
tube,
> the 6BA6, for the RF stage instead of a sharp cutoff that is so
> commonly seen.)

What I was thinking is this:

Assuming that VFO is not changed when transmiting station goes from SSB to CW:

Have a 1st IF with BW say anything from 4 to 8 Khz. Wider bandwidth allows for greater passband tuning. (Probably only need about 5 Khz with the FR50B if not wanting to change sidebands on a particlar band).

Use a 2.5 Khz SSB filter centered on 455 Khz and CW filter centered on 455 Khz. Have 2nd mixer be a VXO with varicap that can be switched in, or with potentiometer marked SSB and CW. When on SSB the carrier lands off-center of 455 Khz, (say 456.5). When on CW flick switch or adjust pot. and that puts carrier on 455 Khz dead center of the CW filter. Vary pot. and that will have the effect of moving the SSB signal across passband of SSB filter.

I think the above is passband tuning.

2387. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-27 23:44:08 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6028r$ap4j$1@ID-150848.news.dfncis.de>
Source record: 36590
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b601s9$e8ku$1@ID-150848.news.dfncis.de...

> What I was thinking is this:
>
> Assuming that VFO is not changed when transmiting station goes
> from SSB to CW:
>
> Have a 1st IF with BW say anything from 4 to 8 Khz. Wider
> bandwidth allows for greater passband tuning. (Probably only
> need about 5 Khz with the FR50B if not wanting to change
> sidebands on a particlar band).
>
> Use a 2.5 Khz SSB filter centered on 455 Khz and CW filter
> centered on 455 Khz. Have 2nd mixer be a VXO with varicap that
> can be switched in, or with potentiometer marked SSB and CW.
When
> on SSB the carrier lands off-center of 455 Khz, (say 456.5).
> When on CW flick switch or adjust pot. and that puts carrier on
> 455 Khz dead center of the CW filter. Vary pot. and that will
> have the effect of moving the SSB signal across passband of SSB
> filter.
>
> I think the above is passband tuning.
>

But, the BFO signal must also track the sideband. I must figure
that out.

2388. Re: Testing the waters: DRAKE 5645 Khz 4 pole xtal filter BW 8 Khz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 00:01:38 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6039v$ff0v$1@ID-150848.news.dfncis.de>
Source record: 36591
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b6028r$ap4j$1@ID-150848.news.dfncis.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b601s9$e8ku$1@ID-150848.news.dfncis.de...
>
> >
> > What I was thinking is this:
> >
> > Assuming that VFO is not changed when transmiting station
goes
> > from SSB to CW:
> >
> > Have a 1st IF with BW say anything from 4 to 8 Khz. Wider
> > bandwidth allows for greater passband tuning. (Probably only
> > need about 5 Khz with the FR50B if not wanting to change
> > sidebands on a particlar band).
> >
> > Use a 2.5 Khz SSB filter centered on 455 Khz and CW filter
> > centered on 455 Khz. Have 2nd mixer be a VXO with varicap
that
> > can be switched in, or with potentiometer marked SSB and CW.
> When
> > on SSB the carrier lands off-center of 455 Khz, (say 456.5).
> > When on CW flick switch or adjust pot. and that puts carrier
on
> > 455 Khz dead center of the CW filter. Vary pot. and that
will
> > have the effect of moving the SSB signal across passband of
SSB
> > filter.
> >
> > I think the above is passband tuning.
> >
>
> But, the BFO signal must also track the sideband. I must
figure
> that out.

SSB

You have 2nd mixer VXO set to SSB. You have BFO marked SET. Here
sideband is "correctly" positioned in passband and BF0 is at the
suitable frequency. Move VXO pot. and that moves sideband across

passband. Now, just alter BF0 untill audio resolves. Don't think there is a need for automatic tracking of BFO when VXO is tuned. Could arrange for that, you just derive BFO frequency from 2nd mixer VXO.

Ought to study what Drake did.

2389. FA: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 00:32:12 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <gKMga.17812$ns6.846770@news2.east.cox.net>
Source record: 36592
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698719

Thanks for looking!

Larry
KQ4BY

2390. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 00:39:33 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v876emqf1lod34@corp.supernews.com>
Source record: 36593
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

This sounds to me like an ideal excuse to learn the PIC. It does take a little screwing your head on sideways to get into it at first, but it's pretty easy, and it's great skill to have in your toolbox.

The remarkable thing about the PIC is that it takes so little to get it cooking. You need a PIC, of course (about $6 for a 16F84), a crystal (about 90 cents), a 5 volt regulator with associated capacitors, and, of course, your LCD. (as others have pointed out, LEDs sound simple at first, but the complexity goes up very quickly). You can get LCDs really cheap from B.G. Micro, but even DigiKey has some pretty nice LCDs for around ten bucks.

of course, you also need a PIC programmer, but this is a one time investment, and you can build on pretty cheap (I once calculated $17 if you buy everything new from Radio Shack, which is about as expensive as you can make it).

Check out www.microchip.com, you can download all the needed docs and software for free, and everything else you can get from DigiKey.

..

"john" <johnkrac@ja.com> wrote in message
news:PGxga.319885$na.22740015@news2.calgary.shaw.ca...
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and then
> display on to either led/lcd screen (led easier to start maybe).
>
> Looking at things....I think I need to use a UART 16550. Which, correct
me
> if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that
in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.
>
> Thanks
>
>

2391. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 01:03:10 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b606v0$298hu$1@hades.csu.net>
Source record: 36594
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Michael A. Terrell wrote:
> Lizard Blizzard wrote:
>
>>In the army I trained for radar repair at Ft Monmouth, right down the
>>street from Long Branch, N.J.

> They trained you to work on RADAR? They pulled me from the Weather
> Vision section at Fort Rucker and sent me out to fix RADAR equipment
> with no training. Of course they didn't train me to work on the CATV,
> video, or microwave CARS equipment either. A draft notice, a MOS test,
> and I was a broadcast engineer.

Well, it was like this. They trained hundreds of search radar repair techs, and then let them loose to do their time, knowing full well that there were only 20 or so Nike Herc search radars in the whole world. So I worked on radars for almost a year at Snelling air defense site in Minneapolis, then I got shipped to Germany where I never did see another radar. That's the typical military intelligence oxymoron: I get trained for radar then get shipped to some place where my talents were unused, and you get shipped to a place with radar but with no training. Furrfu!

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

2392. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 01:11:40 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <gjNga.28120$ja4.1923933@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36595

I have an old (cheap) digital LCR made from Dynascan that will read those
low values pretty good after you "null" the meter first...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:o5m68vgddkcmec2ikcacgrl6c2bpernbd0@4ax.com...
> Anybody ever dealt with the cheap LCR meters versus the older genrad
> type bridges? If so, how do they compare? Can you get good accurate
> readings on the digital meters? Even on very low readings such as 4 or
> 5 picofarads?
>
> Tracy
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2393. Wanted: Service/Operation Manual for Boonton 42B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 01:39:45 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <RPNga.40200$q26.2238286@read1.cgocable.net>
Source record: 36596

Am looking for a copy of a Service/Operation Manual for the Boonton 42B RF
MilliVoltmeter.
Please advise cost or an alternative location to purchase
Not much luck on "Google"..so have to resort to the NG !
>> Norm VE3CZI

2394. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 03:22:52 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b60f6d$6jf$1@slb6.atl.mindspring.net>
Source record: 36497

You might want to check out this website... I hear the LCR meter works nicely.

http://www.aade.com/lcmeter.htm

Jim Pennell
N6BIU

2395. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 03:36:44 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E83C388.E15D094@earthlink.net>
Source record: 36498
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Michael A. Terrell wrote:
> > Lizard Blizzard wrote:
> >
> >>In the army I trained for radar repair at Ft Monmouth, right down the
> >>street from Long Branch, N.J.
>
> > They trained you to work on RADAR? They pulled me from the Weather
> > Vision section at Fort Rucker and sent me out to fix RADAR equipment
> > with no training. Of course they didn't train me to work on the CATV,
> > video, or microwave CARS equipment either. A draft notice, a MOS test,
> > and I was a broadcast engineer.
>
> Well, it was like this. They trained hundreds of search radar repair
> techs, and then let them loose to do their time, knowing full well that
> there were only 20 or so Nike Herc search radars in the whole world. So
> I worked on radars for almost a year at Snelling air defense site in
> Minneapolis, then I got shipped to Germany where I never did see another
> radar. That's the typical military intelligence oxymoron: I get trained
> for radar then get shipped to some place where my talents were unused,
> and you get shipped to a place with radar but with no training. Furrfu!

Maybe they didn't think very many guys would finish the course? One
of my buddies worked on the early radars and kept bragging about how
good he was at troubleshooting. He came dragging in after 9:00 one night
and said he'd spent the whole day working on dogs. I asked him to get
the schematics and give me the symptoms for the first unit, and then
asked a couple questions and told him which part was bad. In 25 minutes
I diagnosed every problem he had spent 12 hours working on and he was
pissed. He demanded to know where I learned RADAR. I laughed and told
him that RADAR was just a stripped down TV system, and a lot easier to
fix. I know I should have rubbed it in, but you get tired of some of
the guys BS after six months or so. Then I taught him some logical
troubleshooting, and he was able to find problems a lot faster.

> --
My first ay of duty at FT. Greely, AK. the station manager asked when
I graduated from Ft. Monmoth. When I told him I had been awarded my MOS
as a civilian acquired skill he grunted and told me "No civilian knows a
damn thing about electronics!" It was all I could do to keep from
laughing in his face. The TV sataion could barely get on the air and I
was told not to do anything to the equipment, but being me, I

justcouldn't ignore the challange of a piece of defective equipment. A month later I had repaired everything, and the only problem we had was film breaking, or a studio light vblowing during the live newscast.

I spent my whole time in the service working on electronics, but the only training I got was how to field strip and clean the M-16 rifle while laying in wet sawdust. Can you believe that they drafted me, gave me no training, gave me a job where you worked 40 hours in two days, then they complained that I wasn't "GI". Geeze! "GI" was enlisted, but I was drafted so I was classed "US". As Bugs Bunny would say, "What a bunch of marons!"

I worked at a radio and TV station as a broadcast engineer, did CATV work, including the installation of the first emergency alert system that took control of 17 CATV systems around the base at the flip of a switch so the base could alert people to a callup, disaster, or a war. It was so primative that we had to use dedicated telephone pairs to switch custom relays built by Winchester Electronics for the project. Of course, the civilian CATV company that served the day rooms objected, but they were reminded of the contract with the Army that they could over ride local programing in a declared emergency. Of course, I got one of those bright red flip up switch covers and used a lead seal so no one could play with it.

The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs in the Grass Valley dual Sync generator system. No video tape, just 16mm film and 35mm slides. Everything was depot level maintaince, but I fixed it anyway.

--

Michael A. Terrell
Central Florida

2396. Re: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 03:40:22 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v87h0nshhp04c0@corp.supernews.com>
Source record: 36499
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

There must be a better place for this. ....must be the third time for
this item Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
news:gKMga.17812$ns6.846770@news2.east.cox.net...
> Please see:
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698
719
>
> Thanks for looking!
>
>
> Larry
> KQ4BY
>
>

2397. WTB shaft adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 06:39:44 UTC
From: Paul and Linda Cooper <plcooper@starband.net>
Message-ID: <3E83EE44.9010907@starband.net>
Source record: 36500

WTB shaft adapters, both 1/4" and 3/8", all metal, with two set screws each side.

Need 3/8" shaft inside to 1/4" solid shaft outside; Need 3/8" shaft inside to 3/8" shaft inside;
Need 1/4" shaft inside to 1/4" shaft inside.

The adapters will probably be no longer than 1.5" overall.

Paul, K6PY

2398. Re: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 11:45:27 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <BPOcncTwE6ROqBmjXTWc2Q@crocker.com>
Source record: 36501
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

a local flea market would be better... of course at most of those you find junk like this for $1 or less in a box of other stuff. must be 12ga gold wire to sell for $14.95!

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message news:v87h0nshhp04c0@corp.supernews.com...
> There must be a better place for this. ....must be the third time for
> this item Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> Office: JCM@McLMcL.Com
> "ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
> news:gKMga.17812$ns6.846770@news2.east.cox.net...
> > Please see:
> >
> >
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698
> 719
> >
> > Thanks for looking!
> >
> >
> > Larry
> > KQ4BY
> >
> >
>

2399. Re: RS232 Display

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 13:02:38 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Rb6cnVuB9eY21RmjXTWcpg@comcast.com>
Source record: 36502
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I have used the LCD+ from NetMedia (www.basicx.com) -- it has a 4X20 LCD, Keyboard decoder, 8-in 10 bit ADC, and 8 relay drivers (ULN2803A) -- a bit overkill for your operation, but having the LCD screen and matrix keyboard decoder on one board is a real plus for me. They cost about $59. It will take TTL levels on the Rx and Tx pins instead of RS232 (or you can use a MAX232) -- but the TTL levels make it easy to interface with PIC's and AVR's.

"john" <johnkrac@ja.com> wrote in message
news:PGxga.319885$na.22740015@news2.calgary.shaw.ca...
> Hey guys....
>
> I have some logging equipment that I'd like to make a "stand-alone"
> display/terminal for.
> At the moment a pc/laptop has to be plugged in to the equipment and a
> terminal program is ran to view the data.
>
> I'd like to build a display that will receive the data in to bins and then
> display on to either led/lcd screen (led easier to start maybe).
>
> Looking at things....I think I need to use a UART 16550. Which, correct
me
> if I'm wrong, converts rs232 to TTL....then I'm guessing I could put that
in
> to a buffer/register/sequencer....basically store the info (how would I
> step/clock this in).
> Then I could take the byte word and parallel output it to display drivers
> w/buffers and display the data until things are updated again.
>
> Thanks
>
>

2400. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 15:02:03 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b61o3t$29kfl$1@hades.csu.net>
Source record: 36503
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Michael A. Terrell wrote:
[snip]

> Maybe they didn't think very many guys would finish the course?

Well, they had a graduation every so many months, so I don't think there was a lack of information in that respect.

>>--
> I was drafted so I was classed "US". As Bugs Bunny would say, "What a
> bunch of marons!"

Maroons?

Hey, it could happen again. The draft, that is. Today young guys don't realize what it was like back then. I stood in line at the processing center, and some sergeant came down the line counting, and stopped and said, "Okay, all you guys, go over there; you're Marines. The rest of you go over there, you're Army." So a guy could get drafted into the Marines, which surprises some.

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

2401. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 16:51:42 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E847DE1.CB63D652@earthlink.net>
Source record: 36504
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Michael A. Terrell wrote:
> [snip]
>
> > Maybe they didn't think very many guys would finish the course?
>
> Well, they had a graduation every so many months, so I don't think there
> was a lack of information in that respect.
>
> >>--
> > I was drafted so I was classed "US". As Bugs Bunny would say, "What a
> > bunch of marons!"
>
> Maroons?
>
> Hey, it could happen again. The draft, that is. Today young guys don't
> realize what it was like back then. I stood in line at the processing
> center, and some sergeant came down the line counting, and stopped and
> said, "Okay, all you guys, go over there; you're Marines. The rest of
> you go over there, you're Army." So a guy could get drafted into the
> Marines, which surprises some.
>
> --

When I went to register for the draft they wanted to know where I worked and what I did, then they gave me the usual physical. Then they said that I had a hearing problem at some frequencies, bad feet, and that I was almost legally blind but I would be drafted because of my electronics background. Basic was hell because of my feet and legs just wouldn't take the long marches but the drill instructors were shocked by how much I could pick up by myself. I told them I was able to load almost any of the old tube type color TV sets by myself as long as I didn't have to bend over. Have you ever carried a 25" color console up a flight of stairs by yourself? I used to be able to. I could lift and hold a 4'*12' sheet of drywall with one hand and drive the nails in with the other. Today, I can only lift a few pounds, and half of my left hand is numb all the time. Life can be a true challenge at times. :)

--

Michael A. Terrell
Central Florida

2402. Re: antenna tunig question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 18:21:09 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <m9198vg2smvo2suml11hp5d8od86v6mbbs@4ax.com>
Source record: 36505

On Mon, 24 Mar 2003 11:47:17 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

|On Mon, 24 Mar 2003 10:00:39 -0800, "Bob" <balbert@cnmnetwork.com>
|wrote:
|
|
|Better posted in rec.radio.amateur.antenna
|
||The core loss would be excessive. That's why all RF power inductors have
||air cores.
|
|Nonsense. The Q of powdered-iron toroids using a mix appropriate to
|the frequency can easily exceed that of carelessly designed air core
|inductors.
|
||
||Certain materials have sufficiently low loss, but they tend to get
||expensive.
|
|Which is it: the loss is excessive or they're too expensive?

In my junk email box, mixed in with the ones promising the secrets to
increasing my penis size and refinancing the debts that I don't have,
was one from someone who doesn't have the fortitude to post his
comments here. I won't reveal his identity or quote the whole email
in respect to his obvious desire to not be embarrassed. I might point
out that he doesn't appear to actually have a ham license, so maybe
that's why he doesn't want to venture into an amateur radio group.

His first sentence reads:

"You're commenting on a reply, without
referencing the original question."

One should note that I quoted in its entirety the post to which I
replied. If the post that I replied to did not include the entire
thread, that's not my problem. Furthermore, if every post included
every comment that went before, Usenet would probably go into
denial-of-service mode.

There was more castigation about my tone and the "fact" that my post
was "off-topic."

Let's examine this.

A blanket statement was made that all RF power inductors have air cores. That is absolutely untrue and I offered a case in rebuttal, which other have confirmed in later comments.

The post to which I replied then appears to imply that there *are* core materials equal to or better than air, which contradicts the earlier statement.

I pointed out the contradiction.

My adoring fan then when on to get his panties in a bunch about the fact that I brought up "torroids", as he misspells it, and that since the topic of mobile antennas is in play (but nowhere to be seen in the post that I replied to) I should confine my comments to that.

Okay. I will just say that *I* know how to vary the inductance (without switching taps) of a coil wound on a core of toroidal shape. Using this principle, I could use a toroidal inductor at the base of a mobile whip and vary its inductance such to resonate the whip.

2403. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 18:48:08 UTC
From: averyfineman@aol.com
Message-ID: <20030328134808.09289.00003875@mb-ch.aol.com>
Source record: 36506

In article <o5m68vgddkcmec2ikcacgrl6c2bpernbd0@4ax.com>, Tracy Fort
<beerbarrel@cox.net> writes:

>Anybody ever dealt with the cheap LCR meters versus the older genrad
>type bridges? If so, how do they compare? Can you get good accurate
>readings on the digital meters? Even on very low readings such as 4 or
>5 picofarads?

Yes and no. :-)

For a capacitance measurement accurate to a few picoFarads with a
"simple" instrument, you can expect manufacturer's stated accuracy
with a capacitance meter (portable, hand-held) with a 200 pFd range.
With the common "3 1/2 digit" display, it can resolve 0.1 pFd.

A typical accuracy for a 200 pFd range is +/- 0.5 pFd...provided the
zeroing is done properly and hands, other objects don't interfere with
the reading.

All anyone can do is to believe the manufacturer's statements on meter
accuracies. Read those in detail...add up the (usually) separate
stated accuracies for the worst accuracy overall.

One way to check small LCR meters on capacitance is to "substitute
compare" any small capacitor with the capacitance (tuning) control on
Q meters. Those capacity scales are quite accurate (again, read the
manufacturer's stated accuracy values). With any resonating coil in
place and capacitance control set to a convenient higher value, add
the fixed comparison capacitor on the Q Meter. Back off the Q Meter's
capacity control until you get resonance. The fixed comparison cap's
value is the difference of the Q Meter capacitance control readings.

Len Anderson
retired (from regular hours) electronic engineer person

2404. Free shematic link

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 22:19:55 UTC
From: 9a2us <oluja@hi.hinet.hr>
Message-ID: <b62hre$5ik7$1@as201.hinet.hr>
Source record: 36507

http://hamradio.online.ru/sch.htm

2405. Measurements Model 59LF ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 22:53:15 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v89kjlmkpbl0a@corp.supernews.com>
Source record: 36508

My Model 59LF tuning head goes down to 100kc. Does anyone know if Measurements made a tuning head that went below 100kc or has anyone made a coil that would go to 50kc? Did any other company make a grid dip that went lower than 100kc?
tnx
hank wd5jfr

2406. wrong email address??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 23:07:56 UTC
From: Roln <roln@yahoo.com>
Message-ID: <gB4ha.264987$6b3.806651@rwcrnsc51.ops.asp.att.net>
Source record: 36509

A fellow ham gave me the email address of someone that has plans for
building a solid state amplifier, but the address is invalid.
Perhaps someone on this NG knows the correct address???

The address I have is:

dave@ticks.force9.co

TIA

Roln

2407. Re: wrong email address??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-28 23:43:10 UTC
From: Paul Burridge <redscar@spamfree.notformail!>
Message-ID: <0dm98vg9ef7dso5m2f95t84nbln8gvnov5@4ax.com>
Source record: 36510

On Fri, 28 Mar 2003 23:07:56 GMT, "Roln" <roln@yahoo.com> opined
thusly:

>A fellow ham gave me the email address of someone that has plans for
>building a solid state amplifier, but the address is invalid.
>Perhaps someone on this NG knows the correct address???
>
>The address I have is:
>
> dave@ticks.force9.co

Try dave@ticks.force9.co.uk
--

"What is now proved was once only imagin'd"
- William Blake, 1793

2408. wrong email address??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 00:19:51 UTC
From: Roln <roln@yahoo.com>
Message-ID: <HE5ha.265728$6b3.808320@rwcrnsc51.ops.asp.att.net>
Source record: 36511

"Paul Burridge" wrote :
Try dave@ticks.force9.co.uk

Hi Paul,

Tried that and it was rejected too.....thanks for your post.
Roln

> >A fellow ham gave me the email address of someone that has plans for
> >building a solid state amplifier, but the address is invalid.
> >Perhaps someone on this NG knows the correct address???
> >
> >The address I have is:
> >
> > dave@ticks.force9.co
>
> Try dave@ticks.force9.co.uk
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

2409. Zwischenbasis-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 02:18:38 UTC
From: la8ak.xnd@online.no
Message-ID: <3e84ffe2.3703944@news.online.no>
Source record: 36512

Put some notes about the Zwischenbasis-stage at
http://home.online.no/~la8ak/2c.htm
It has been used lately by G3SBI, W4ZCB, K6DLG and other in Radcom and
possibly QST. Have written some historical information. Would be
pleased to have more info. Also have some older info from DL1OY
Helmut, but I don't know for certain if it was invented in Germany or
by Philips in Nederland, and what year it was first mentioned

hpe 2 hr fm u
73
Jan-Martin, LA8AK
http://home.online.no/~la8ak/200.htm
--
remove ,xnd to reply

2410. Re: Filter choke anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 02:45:27 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v8a26ddt54n031@corp.supernews.com>
Source record: 36513

Jeremy,
Filter caps were much lower values in 1940 than they are now. Instead of using 16 mf caps, use a 50 and a 200. You will not need a high reactance choke. You could even substitute a 1-2K resistor. Put you money into a power transformer and 6 volt tubes instead. That thing looks like a deathtrap!
Ray
"Jeremy Becnel" <desfox_at_sydcom.net> wrote in message news:3e7fe00d$1_5@corp.newsgroups.com...
> Guys and gals,
>
> Does anyone know where I can get a 20 henry, 500 ohm filter choke? Im
> wanting to start building the first set in the "Radio For The Millions"
> book. I can get everything else either locally or online, but not a friggin
> 20h 500 ohm filter choke.
>
> Anything that could be easily substituted for it?
>
> Jeremy
> KC5TEK
>
>
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2411. Re: Zwischenbasis-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 03:52:16 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <QL8ha.6154$Zo.4956@sccrnsc03>
Source record: 36514

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e84ffe2.3703944@news.online.no...
> Put some notes about the Zwischenbasis-stage at
> http://home.online.no/~la8ak/2c.htm
> It has been used lately by G3SBI, W4ZCB, K6DLG and other in Radcom and
> possibly QST. Have written some historical information. Would be
> pleased to have more info. Also have some older info from DL1OY
> Helmut, but I don't know for certain if it was invented in Germany or
> by Philips in Nederland, and what year it was first mentioned
>
> hpe 2 hr fm u
> 73
> Jan-Martin, LA8AK

My first exposure to it was 20 years ago in Haywards Introduction to RF design. Pg 216. I built one tested by G3SBI and using a VMP-4 at 28 volts @ 0.7 Amps that measured +56 dBm Ip3. Have 2-3 of them around as shop amplifiers. Problem with it as a post mixer amplifier, was that if hit with appreciable RF, it could put out 7-8 watts and fry any subsequent filter. We have reduced our sights on the holy grail and settled for a quad set of J-310's as post mixer amplifiers biased to about 80-90 mA. Those will do +26 dBm input Ip3 and still flatten out at about +10 dBm or so if accidently driven hard. BIG advantage is unbelievably low Noise figure. Have measured several at under 1.3 dB

The source impedance MUST be kept very low if to be broadbanded. In that respect, the VMP-4 with it's 12 bonding wires from source to bridge did very much better than MaCom's DU20 with only two. Excellent writeups by Pat Hawker in TT going back at least 5-6 years

W4ZCB

2412. Re: wrong email address??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 08:27:15 UTC
From: John Mortlock <heads@global.freeserve.co.uk>
Message-ID: <b63ll3qje1@newsg1.svr.pol.co.uk>
Source record: 36515

"Roln" <roln@yahoo.com> wrote in message
news:gB4ha.264987$6b3.806651@rwcrnsc51.ops.asp.att.net...
> A fellow ham gave me the email address of someone that has plans for
> building a solid state amplifier, but the address is invalid.
> Perhaps someone on this NG knows the correct address???
>
> The address I have is:
>
> dave@ticks.force9.co
>
> TIA
> Roln

Force9 is a UK ISP. Here is their site http://www.force9.co.uk
Maybe you can find something there or maybe email force9.

2413. Re: Zwischenbasis-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 11:17:00 UTC
From: la8ak.xnd@online.no
Message-ID: <3e85807a.400700@news.online.no>
Source record: 36516

Suppose it is the W7ZOI/W1FB book "Solid state design for the RA"?
Mine is dated 1977 (bought in 84) and it has a lot of printing
mistakes, So I rather use formulas from RCA Solid state Power circuits
or other, LA6VBA got a later version without the same printing
mistakes and hopefully, correct formulas. Do you mention another book
or just a later update?
73, Jan-Martin, LA8AK

Ps. Just as I should post this, I got a reference to another item:
http://www.home.earthlink.net/~christrask/AugAmp1.pdf
On Sat, 29 Mar 2003 03:52:16 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>> Put some notes about the Zwischenbasis-stage at
>> http://home.online.no/~la8ak/2c.htm
>> It has been used lately by G3SBI, W4ZCB, K6DLG and other in Radcom and
>> possibly QST. Have written some historical information.
>
>My first exposure to it was 20 years ago in Haywards Introduction to RF
>design. Pg 216. I built one tested by G3SBI and using a VMP-4 at 28 volts @
>0.7 Amps that measured +56 dBm Ip3. Have 2-3 of them around as shop
>amplifiers. Problem with it as a post mixer amplifier, was that if hit with
>appreciable RF, it could put out 7-8 watts and fry any subsequent filter. We
>have reduced our sights on the holy grail and settled for a quad set of
>J-310's as post mixer amplifiers biased to about 80-90 mA. Those will do +26
>dBm input Ip3 and still flatten out at about +10 dBm or so if accidently
>driven hard. BIG advantage is unbelievably low Noise figure. Have measured
>several at under 1.3 dB
>
>The source impedance MUST be kept very low if to be broadbanded. In that
>respect, the VMP-4 with it's 12 bonding wires from source to bridge did very
>much better than MaCom's DU20 with only two. Excellent writeups by Pat
>Hawker in TT going back at least 5-6 years
>
>W4ZCB

--
remove ,xnd to reply

2414. Huge group for transmitter and radio freaks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 13:29:26 UTC
From: Dutch Short-Wava association <alinter@alwaysaccess.nl>
Message-ID: <b6473h$j59$1@hermes.castel.nl>
Source record: 36517

Huge group for transmitter and radio freaks

that like to repair our build the radio or transmitter theirselves. Also ham stuff and heaps of other stuff. Join up for free,
Share info, tips, tricks, schematics, I my self wil ad new schematics every month and i think a lot of members wil do the same.
Greetings from the moderator Alfred

here the groups adress

http://groups.yahoo.com/group/The_Radio_and_Transmitter_Electronics

We also hope you can ad a link to this group.
As you know. how more members we have the more powerfull and usseble the group will be for their members...
P.S. Don't forget to join up!!

Group Email Addresses

Post message: The_Radio_and_Transmitter_Electronics@yahoogroups.com
Subscribe: The_Radio_and_Transmitter_Electronics-subscribe@yahoogroups.com
Unsubscribe:
The_Radio_and_Transmitter_Electronics-unsubscribe@yahoogroups.com
List owner: The_Radio_and_Transmitter_Electronics-owner@yahoogroups.com

2415. Re: Zwischenbasis-amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 13:51:16 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <oxhha.279973$sf5.196098@rwcrnsc52.ops.asp.att.net>
Source record: 36518

I have never found it in SSD, despite having 3 copies. (One shop, one shack and one in the "reading room"). It is described and explained in Haywards new Son of SSD, "Experimental methods in RF Design". Also as previously mentioned in IRFD, originally published in hard back in 1982.

Trasks Augmented amplifier, and augmented mixer are quite complex, and in the case of the mixer at least, don't bring anything to the table that a good symmetrical FST 3125 can't better. I've never built his amplifier, nor found the measured specs on it.

W4ZCB

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e85807a.400700@news.online.no...
> Suppose it is the W7ZOI/W1FB book "Solid state design for the RA"?
> Mine is dated 1977 (bought in 84) and it has a lot of printing
> mistakes, So I rather use formulas from RCA Solid state Power circuits
> or other, LA6VBA got a later version without the same printing
> mistakes and hopefully, correct formulas. Do you mention another book
> or just a later update?
> 73, Jan-Martin, LA8AK

>
> Ps. Just as I should post this, I got a reference to another item:
> http://www.home.earthlink.net/~christrask/AugAmp1.pdf

2416. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 23:07:37 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ZGpha.11715$0g4.384814@news2.east.cox.net>
Source record: 36519

That's a very nice and accurate meter for the price. It has a
zeroing feature to eliminate lead or fixture capacitances
from the readings.

Peter

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:b60f6d$6jf$1@slb6.atl.mindspring.net...
> You might want to check out this website... I hear the LCR meter works
> nicely.
>
>
> http://www.aade.com/lcmeter.htm
>
>
> Jim Pennell
> N6BIU
>
>

2417. Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 23:17:15 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com>
Source record: 36520

Here goes...

Picked up a 12v power supply for my ham radio that has a 25 amp
output...

When I put the volt meter on the power supply I have an output of 13.8
volts. I can adjust the pot inside and get it down to about 12.5
volts...no problems

but when I hook up the radio to the supply with the voltmeter still
connected in parrallel to the radio the voltale goes up to over 19
volts...is this normal operation or is something amiss..I don't want
to destroy my radio...

Any help?

thanks,
Tracy
Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2418. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-29 23:49:54 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E87837B.A9EBD50C@rica.net>
Source record: 36521

Tracy Fort wrote:
>
> Here goes...
>
> Picked up a 12v power supply for my ham radio that has a 25 amp
> output...
>
> When I put the volt meter on the power supply I have an output of 13.8
> volts. I can adjust the pot inside and get it down to about 12.5
> volts...no problems
>
> but when I hook up the radio to the supply with the voltmeter still
> connected in parrallel to the radio the voltale goes up to over 19
> volts...is this normal operation or is something amiss..I don't want
> to destroy my radio...

Something is not right. I would try hooking a headlight bulb to the supply to see if that also sees excess voltage. It sounds like the rectifier filter capacitor is open, and you are adjusting an average voltage that includes both the regulated peaks, and the low voltage between them. Then, when you connect a radio, its supply input capacitors are charging up to the peaks, and holding up during the dips. A headlight will not do this, but a headlight in parallel with a big capacitor will.

It is also possible that the regulator is going nuts when this load is connected, and changing the effective output. An oscilloscope would quickly tell you if either of these was going on.

--
John Popelish

2419. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 00:03:02 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <Wuqha.11962$0g4.398558@news2.east.cox.net>
Source record: 36522

Tracy..

What's the input resistance of the voltmeter?

Larry
KQ4BY

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
> Here goes...
>
> Picked up a 12v power supply for my ham radio that has a 25 amp
> output...
>
> When I put the volt meter on the power supply I have an output of 13.8
> volts. I can adjust the pot inside and get it down to about 12.5
> volts...no problems
>
> but when I hook up the radio to the supply with the voltmeter still
> connected in parrallel to the radio the voltale goes up to over 19
> volts...is this normal operation or is something amiss..I don't want
> to destroy my radio...
>
> Any help?
>
> thanks,
> Tracy
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2420. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 00:37:23 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <2oec8vku7ocr9vg4hm667fspo7hkds9iou@4ax.com>
Source record: 36523

To tell you the truth, I don't know. I can tell you it's a simpson model 467 high impedence meter. I now know that the pot to make minor voltages was open. I don't know what the value is but I subbed in a 0-30k pot and now the voltage bounces between 13 and 16 volts when the radio is hooked up. It is fairly steady at 12.8 when the radio is not hooked up. This power supply does not use a standard rectifier bridge. It has 2 big diodes with a small filter cap between them. To me, it seems as if some ac voltage is leaking through. Of course, I'm along way from an expert....

Tracy

On Sun, 30 Mar 2003 00:03:02 GMT, "ga_boneyard"
<ga_boneyard@hotmail.com> wrote:

>Tracy..
>
>What's the input resistance of the voltmeter?
>
>Larry
>KQ4BY
>
>"Tracy Fort" <beerbarrel@cox.net> wrote in message
>news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
>> Here goes...
>>
>> Picked up a 12v power supply for my ham radio that has a 25 amp
>> output...
>>
>> When I put the volt meter on the power supply I have an output of 13.8
>> volts. I can adjust the pot inside and get it down to about 12.5
>> volts...no problems
>>
>> but when I hook up the radio to the supply with the voltmeter still
>> connected in parrallel to the radio the voltale goes up to over 19
>> volts...is this normal operation or is something amiss..I don't want
>> to destroy my radio...
>>
>> Any help?
>>
>> thanks,
>> Tracy
>> Tracy Fort
>>
>> KE4ODD

>>
>> beerbarrel@cox<NOSPAM>.net
>>
>> remove <NOSPAM> for repliess
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2421. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 01:03:22 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v8cgiqrg8m1e6a@corp.supernews.com>
Source record: 36524

Tracy,
Is this power supply a "battery charger"? Battery chargers generally put out unrectified, pulsating direct current. Your voltmeter will display the average voltage. When you put a capacitor across it, the capacacitor fills in the gaps in the supply output and you will read a nearly peak voltage, about 1/3 higher. Your radio would have capacitors at the power input.
Ray
"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
> Here goes...
>
> Picked up a 12v power supply for my ham radio that has a 25 amp
> output...
>
> When I put the volt meter on the power supply I have an output of 13.8
> volts. I can adjust the pot inside and get it down to about 12.5
> volts...no problems
>
> but when I hook up the radio to the supply with the voltmeter still
> connected in parrallel to the radio the voltale goes up to over 19
> volts...is this normal operation or is something amiss..I don't want
> to destroy my radio...
>
> Any help?
>
> thanks,
> Tracy
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2422. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 01:14:49 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <t7hc8vc7bfb12ueppolii7tph1ojd812jq@4ax.com>
Source record: 36525

Yes...It is a csine power verter used in the rv industry. It has 5
connection points with fuses under the front cover. One of these is
marked for a radio. I really bought the thing to make a p/s. It had a
18v 25a transformer that seemed very usable to me. When I got it, I
thought that I could use it the way it was. Is the thing usable or
will I need to go back to my original plan?

Tracy

On Sat, 29 Mar 2003 17:03:22 -0800, "Capoot" <rlcap@xprt.net> wrote:

>Tracy,
>Is this power supply a "battery charger"? Battery chargers generally put
>out unrectified, pulsating direct current. Your voltmeter will display the
>average voltage. When you put a capacitor across it, the capacacitor fills
>in the gaps in the supply output and you will read a nearly peak voltage,
>about 1/3 higher. Your radio would have capacitors at the power input.
>Ray
>"Tracy Fort" <beerbarrel@cox.net> wrote in message
>news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
>> Here goes...
>>
>> Picked up a 12v power supply for my ham radio that has a 25 amp
>> output...
>>
>> When I put the volt meter on the power supply I have an output of 13.8
>> volts. I can adjust the pot inside and get it down to about 12.5
>> volts...no problems
>>
>> but when I hook up the radio to the supply with the voltmeter still
>> connected in parrallel to the radio the voltale goes up to over 19
>> volts...is this normal operation or is something amiss..I don't want
>> to destroy my radio...
>>
>> Any help?
>>
>> thanks,
>> Tracy
>> Tracy Fort
>>
>> KE4ODD
>>
>> beerbarrel@cox<NOSPAM>.net
>>
>> remove <NOSPAM> for repliess

>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2423. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 01:48:04 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v8cj6mcka5aa7e@corp.supernews.com>
Source record: 36526

Tracy,
Try placing a filter capacitor across the output and see if the voltage
jumps up. That would indicate an unfiltered output.
How much current does your radio use? Is it a receiver? Transceiver?
Ray

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:t7hc8vc7bfb12ueppolii7tph1ojd812jq@4ax.com...
> Yes...It is a csine power verter used in the rv industry. It has 5
> connection points with fuses under the front cover. One of these is
> marked for a radio. I really bought the thing to make a p/s. It had a
> 18v 25a transformer that seemed very usable to me. When I got it, I
> thought that I could use it the way it was. Is the thing usable or
> will I need to go back to my original plan?
>
> Tracy
>
> On Sat, 29 Mar 2003 17:03:22 -0800, "Capoot" <rlcap@xprt.net> wrote:
>
> >Tracy,
> >Is this power supply a "battery charger"? Battery chargers generally put
> >out unrectified, pulsating direct current. Your voltmeter will display
the
> >average voltage. When you put a capacitor across it, the capacacitor
fills
> >in the gaps in the supply output and you will read a nearly peak
voltage,
> >about 1/3 higher. Your radio would have capacitors at the power input.
> >Ray
> >"Tracy Fort" <beerbarrel@cox.net> wrote in message
> >news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
> >> Here goes...
> >>
> >> Picked up a 12v power supply for my ham radio that has a 25 amp
> >> output...
> >>
> >> When I put the volt meter on the power supply I have an output of 13.8
> >> volts. I can adjust the pot inside and get it down to about 12.5
> >> volts...no problems
> >>
> >> but when I hook up the radio to the supply with the voltmeter still
> >> connected in parrallel to the radio the voltale goes up to over 19
> >> volts...is this normal operation or is something amiss..I don't want
> >> to destroy my radio...

> >>
> >> Any help?
> >>
> >> thanks,
> >> Tracy
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> >> beerbarrel@cox<NOSPAM>.net
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> remove <NOSPAM> for repliess

2424. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 01:55:07 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <%7sha.5668$cO3.285678@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36527

Something is very wrong...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
> Here goes...
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> Picked up a 12v power supply for my ham radio that has a 25 amp
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> connected in parrallel to the radio the voltale goes up to over 19
> volts...is this normal operation or is something amiss..I don't want
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> Any help?
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> thanks,
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> Tracy Fort
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> KE4ODD
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> remove <NOSPAM> for repliess

2425. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 01:55:21 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <kijc8v8oqj9mjgehliru5fhhiteqpdlcgf@4ax.com>
Source record: 36528

I did that..I used a 1.6uf and the voltage went up about 1.5
volts...That explains the lack of a rectifier bridge. It has two
diodes with a cap across them. The output looks to me like it has AC
in it. The meter reading is steady but it has that graphical bar under
the readout that bounces up and down...

I will be using the supply with a hf transceiver that has a 100 watt
output. I thought that I might build another circuit board and use the
existing transformer. It is in a pretty neat housing that could be
reused...

Tracy

On Sat, 29 Mar 2003 17:48:04 -0800, "Capoot" <rlcap@xprt.net> wrote:

>Tracy,
>Try placing a filter capacitor across the output and see if the voltage
>jumps up. That would indicate an unfiltered output.
>How much current does your radio use? Is it a receiver? Transceiver?
>Ray
>
>"Tracy Fort" <beerbarrel@cox.net> wrote in message
>news:t7hc8vc7bfb12ueppolii7tph1ojd812jq@4ax.com...
>> Yes...It is a csine power verter used in the rv industry. It has 5
>> connection points with fuses under the front cover. One of these is
>> marked for a radio. I really bought the thing to make a p/s. It had a
>> 18v 25a transformer that seemed very usable to me. When I got it, I
>> thought that I could use it the way it was. Is the thing usable or
>> will I need to go back to my original plan?
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>> Tracy
>>
>> On Sat, 29 Mar 2003 17:03:22 -0800, "Capoot" <rlcap@xprt.net> wrote:
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>> >Tracy,
>> >Is this power supply a "battery charger"? Battery chargers generally put
>> >out unrectified, pulsating direct current. Your voltmeter will display
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>> >average voltage. When you put a capacitor across it, the capacacitor
>fills
>> >in the gaps in the supply output and you will read a nearly peak
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>> >about 1/3 higher. Your radio would have capacitors at the power input.
>> >Ray
>> >"Tracy Fort" <beerbarrel@cox.net> wrote in message

>> >news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
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>> >> connected in parrallel to the radio the voltale goes up to over 19
>> >> volts...is this normal operation or is something amiss..I don't want
>> >> to destroy my radio...
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>> >> Any help?
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>> >> thanks,
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>> >> beerbarrel@cox<NOSPAM>.net
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>> beerbarrel@cox<NOSPAM>.net
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>> remove <NOSPAM> for repliess
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2426. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 02:12:22 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E865286.4000701@bellsouth.net>
Source record: 36529

Brian Griffey wrote:
> Something is very wrong...
>
> --
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
> Brian Griffey
> See the SkyWave Linear Amplifier at
> http://home.att.net/~briangriffey/Index.html
> $130 through April03!
> ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
>
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> "Tracy Fort" <beerbarrel@cox.net> wrote in message
> news:3cac8vctqnus5gkbf3a4gl8jrkacfv053i@4ax.com...
>
>>Here goes...
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>>volts...no problems
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>>connected in parrallel to the radio the voltale goes up to over 19
>>volts...is this normal operation or is something amiss..I don't want
>>to destroy my radio...
>>
>>Any help?
>>
>>thanks,
>>Tracy
>>Tracy Fort
>>
>>KE4ODD
>>
>>beerbarrel@cox<NOSPAM>.net
>>
>>remove <NOSPAM> for repliess
>
>
>

Actually NOT a good idea to use a battery charger type supply
to run a tranceiver. You want a well filtered, regulated supply with
crowbar over voltage protection. You could ADD this circuitry to
the output of a power supply lacking this if you already have
a supply with a good transformer and rectifier.

2427. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 02:37:28 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <lnlc8vcprqirs549hheoqgohs81lfbhqve@4ax.com>
Source record: 36530

On Sun, 30 Mar 2003 01:14:49 GMT, Tracy Fort <beerbarrel@cox.net>
wrote:

|Yes...It is a csine power verter used in the rv industry. It has 5
|connection points with fuses under the front cover. One of these is
|marked for a radio. I really bought the thing to make a p/s. It had a
|18v 25a transformer that seemed very usable to me. When I got it, I
|thought that I could use it the way it was. Is the thing usable or
|will I need to go back to my original plan?
|

Man trash this thing before you blow your rig. At the very least, buy
an Astron and be done with it.

I'm even in the process of converting an Astron to a battery charger
for my RV just to get rid of the switching noise from the POS built-in
charger.

I don't sell Astron or have any interest in them. They just seem to
offer the most bang for the buck.

2428. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 06:53:50 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v8d53v8jstm4f3@corp.supernews.com>
Source record: 36531

Tracy,
A full wave rectifier from a center tapped transformer would be two diodes with a capacitor across them...
As John Popelish suggested: the cap may be open, or possibly it is made to be used with a battery at the output.
For RV use, it may be a battery charger...The voltage would go high to start, and drop down to close to 12 volts when the battery is charged.
Possibly it should be used with a battery rather than as a battery substitute. This is just a guess. I cannot find "c sine power verter" on the web.
You really need more information before you plug your radio into it again.
Ray

"Tracy Fort" <beerbarrel@cox.net> wrote in message news:t7hc8vc7bfb12ueppolii7tph1ojd812jq@4ax.com...
> Yes...It is a csine power verter used in the rv industry. It has 5
> connection points with fuses under the front cover. One of these is
> marked for a radio. I really bought the thing to make a p/s. It had a
> 18v 25a transformer that seemed very usable to me. When I got it, I
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> On Sat, 29 Mar 2003 17:03:22 -0800, "Capoot" <rlcap@xprt.net> wrote:
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> >Is this power supply a "battery charger"? Battery chargers generally put
> >out unrectified, pulsating direct current. Your voltmeter will display
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> >in the gaps in the supply output and you will read a nearly peak
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> >about 1/3 higher. Your radio would have capacitors at the power input.
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2429. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 13:46:42 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <FzCha.3290$8s6.23688@newsfep4-glfd.server.ntli.net>
Source record: 36532

1.6uF isn't nearly enough capacitance, even for running the set on receive.
If I were you I'd junk it, unless you actually like building stuff. Nowadays
you cannot save any money by building your own supply, the only reasons for
doing so are because you like it, or because you have a unique requirement.

Alec Wood M1BNK
Teesside UK

"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:kijc8v8oqj9mjgehliru5fhhiteqpdlcgf@4ax.com...
> I did that..I used a 1.6uf and the voltage went up about 1.5
> volts...That explains the lack of a rectifier bridge. It has two
> diodes with a cap across them. The output looks to me like it has AC
> in it. The meter reading is steady but it has that graphical bar under
> the readout that bounces up and down...
>
> I will be using the supply with a hf transceiver that has a 100 watt
> output. I thought that I might build another circuit board and use the
> existing transformer. It is in a pretty neat housing that could be
> reused...
>
> Tracy
>
> On Sat, 29 Mar 2003 17:48:04 -0800, "Capoot" <rlcap@xprt.net> wrote:
>
> >Tracy,
> >Try placing a filter capacitor across the output and see if the voltage
> >jumps up. That would indicate an unfiltered output.
> >How much current does your radio use? Is it a receiver? Transceiver?
> >Ray
> >
> >"Tracy Fort" <beerbarrel@cox.net> wrote in message
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> >> Yes...It is a csine power verter used in the rv industry. It has 5
> >> connection points with fuses under the front cover. One of these is
> >> marked for a radio. I really bought the thing to make a p/s. It had a
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2430. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 13:48:51 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <7BCha.34305$ja4.2216165@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36533
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"Michael A. Terrell" <mike.terrell@earthlink.net> wrote in message
news:3E83C388.E15D094@earthlink.net...
>
> (....snip....)
>
> The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs
> in the Grass Valley dual Sync generator system.

Not to be argumentative, but I'm wondering if the dual Sync Generator system you're referring to wasn't made by Telemation...not GVG ? I don't recall any RTL parts in early Grass Valley products, but I do recall an old 1RU high Telemation sync generator with beige/tan front panel and built-in changeover relays. Two of the boxes would've comprised a "dual sync generator system". Not sure if it used RTL or not (for some reason, I think it was TTL but it's been a long time ago)......

2431. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 14:12:21 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <4vud8vs0mp91fp61qq0dou7sibfll11ua6@4ax.com>
Source record: 36534

I guess that is tha topic of the newsgroup...homebrew...

The cap was just for a test.

Tracy

On Sun, 30 Mar 2003 14:46:42 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>1.6uF isn't nearly enough capacitance, even for running the set on receive.
>If I were you I'd junk it, unless you actually like building stuff. Nowadays
>you cannot save any money by building your own supply, the only reasons for
>doing so are because you like it, or because you have a unique requirement.
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>> >> Yes...It is a csine power verter used in the rv industry. It has 5
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Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2432. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 16:05:29 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <c05e8vc857s16a5j2f9fjj2pd27k2h35io@4ax.com>
Source record: 36535

On Sun, 30 Mar 2003 14:12:21 GMT, Tracy Fort <beerbarrel@cox.net>
wrote:

|I guess that is tha topic of the newsgroup...homebrew...

So the csine power verter is homebrew?
|
|The cap was just for a test.

You need tens of thousands of uF for a start. Then you need a 723 or similar regulator chip and support electronics, a predriver transisor and probably four power transistors for series pass elements. An SCR crowbar would be a good idea too since I think you've probably used up your allotment of good luck in not having already blown up your radio.

2433. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 16:20:44 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <au5e8vkjfo26iv01o79pagqlcq1n12lkgt@4ax.com>
Source record: 36536

No...my original idea was to rob the transformer out of the power converter and construct a power supply. After I obtained the power supply, I though I might be able to use it as is.

Like I said, I used the cap to see if the voltage stabilized any. It did. I wasn't trying to make the supply usable with the radio.

The radio I hooked up was an old 2meter beater that I had lying aroud. It was not the rig that I plan on using with the supply. If it burnt it up it was no big deal.

The converter had 5 outputs, one of which goes through a circuit board and is supposed to be a filtered output for a radio. That was why I though it might work. Something is evidently wrong with the board. Either way, It does contain a very usable 18v 25a transformer, a nice case, and a large heatsink. I think with a few dollars I can construct a nice power supply. In addition, I might be able to learn something. That's why I was posting this in the homebrew section. I guess I get more satisfaction out of building that buying.

anyway...thats my story and I'm sticking to it...

Tracy

On Sun, 30 Mar 2003 09:05:29 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Sun, 30 Mar 2003 14:12:21 GMT, Tracy Fort <beerbarrel@cox.net>
>wrote:
>
>|I guess that is tha topic of the newsgroup...homebrew...
>
>So the csine power verter is homebrew?
>|
>|The cap was just for a test.
>
>You need tens of thousands of uF for a start. Then you need a 723 or
>similar regulator chip and support electronics, a predriver transisor
>and probably four power transistors for series pass elements. An SCR
>crowbar would be a good idea too since I think you've probably used up
>your allotment of good luck in not having already blown up your radio.

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2434. Air Wound Coil -- 32 uH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 16:32:17 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <I_Eha.13285$0g4.590403@news2.east.cox.net>
Source record: 36537
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015264353
>
> Thanks for looking..
>
>
> Larry
> KQ4BY
>
>

2435. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 16:47:39 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87llywsswk.fld@barrow.com>
Source record: 36539

Tracy Fort <beerbarrel@cox.net> wrote:
>No...my original idea was to rob the transformer out of the power
>converter and construct a power supply. After I obtained the power
>supply, I though I might be able to use it as is.
>
>Like I said, I used the cap to see if the voltage stabilized any. It
>did. I wasn't trying to make the supply usable with the radio.
>
>The radio I hooked up was an old 2meter beater that I had lying aroud.
>It was not the rig that I plan on using with the supply. If it burnt
>it up it was no big deal.
>
>The converter had 5 outputs, one of which goes through a circuit
>board and is supposed to be a filtered output for a radio. That was
>why I though it might work. Something is evidently wrong with the

There may not be a thing wrong with it. If you put a battery on
it the various output will stablize and it will filter out noise
and AC ripple. A battery is much like a really good capacitor,
as far as filtering goes, and much like a poor zener diode as
far as voltage regulation.

The only question is whether this charger is designed only to
charge a battery or if it can also maintain a float voltage when
the battery is fully charged. If it can maintain a float
voltage you've got a nice setup for emergency operation when the
AC power fails.

>board. Either way, It does contain a very usable 18v 25a transformer,
>a nice case, and a large heatsink. I think with a few dollars I can
>construct a nice power supply. In addition, I might be able to learn
>something. That's why I was posting this in the homebrew section. I
>guess I get more satisfaction out of building that buying.
>
>anyway...thats my story and I'm sticking to it...

Sounds good to me, but I'd first take a look at figuring out
exactly what it was meant to do in the first place, and see if
that isn't more interesting that using the parts for something
else.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2436. WTB National MB 40-5L input assy.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 18:21:58 UTC
From: John Ahrens <bjahrens@mhcable.com>
Message-ID: <3E8735C6.2020709@mhcable.com>
Source record: 36540

Hello All:
Looking for grid input circuit assy MB 40-5L
73 John kc2fxe
Call after 6:00 pm 518-678-5672

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2437. WTT BC-610 Mod Xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 19:39:30 UTC
From: Sparks <sparksw4eas@mindspring.com>
Message-ID: <3E8747F2.546E@mindspring.com>
Source record: 36538

Need a Modulation transformer for a Model "I" BC-610 transmitter. Model "I" only. Have stuff to trade. Thanks Sparks W4EAS

2438. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 20:26:59 UTC
From: Douglas Kilgore <dougkilgore@attbi.com>
Message-ID: <3E8751CA.EAAA2085@attbi.com>
Source record: 36541

Could those be Silicon Controlled Rectifiers (SCR) instead of regular diodes? That would give an irregular waveform yet would be OK for running resistive type loads in an RV. That's what was in my trailer.

In 1999 I had problems with overvoltage on the power converter in my camper trailer and the folks at BR Wholesale in Marshall, MI were able to help me. They explained the circuit to me. Give them a call at 1-800-848-0934. Won't hurt and might help.

Doug Kilgore KD5OUG
kd5oug@arrl.net

Tracy Fort wrote:
>
> I did that..I used a 1.6uf and the voltage went up about 1.5
> volts...That explains the lack of a rectifier bridge. It has two
> diodes with a cap across them. The output looks to me like it has AC
> in it. The meter reading is steady but it has that graphical bar under
> the readout that bounces up and down...
>
> I will be using the supply with a hf transceiver that has a 100 watt
> output. I thought that I might build another circuit board and use the
> existing transformer. It is in a pretty neat housing that could be
> reused...
>
> Tracy
>

2439. FA: Re: Air Wound Coil -- 32 uH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 21:41:40 UTC
From: Willis and Suzie Whatley <whatley@frii.com>
Message-ID: <3e87647e$0$198$75868355@news.frii.net>
Source record: 36542
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

List as FA:

2440. Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 22:11:09 UTC
From: David Drumheller <david@drumheller.org>
Message-ID: <3e876b41_6@vienna7.his.com>
Source record: 36543

I'd like to design and build some equipment, but don't know
where to buy transistors, ICs and other small parts over-the-counter in
Washington, DC or Baltimore, MD. Years ago, Radio Shack offered such item
for
sale, but the chain has now evolved into a consumer electroncs retail store.
The selection of parts was never spectacular, but at least you could find
one of these store near your home.

So where can I go these days? I'd like to browse through the parts myself,
and I'm reluctant to mail order stuff I haven't seen and touched.

-Dave, K3WQ
david@drumheller.org

2441. Re: FA: Re: Air Wound Coil -- 32 uH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 22:17:51 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <36re8vkmebjls161ol2ut1k9qs4pna155i@4ax.com>
Source record: 36544
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

On Sun, 30 Mar 2003 14:41:40 -0700, "Willis and Suzie Whatley"
<whatley@frii.com> wrote:

|List as FA:

Or even better don't list it at all in inappropriate groups.
|

2442. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 23:21:53 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <plZha.1889$8i1.615@newsfep1-gui.server.ntli.net>
Source record: 36455

"Floyd Davidson" <floyd@ptialaska.net> wrote in message
news:87llywsswk.fld@barrow.com...
> Tracy Fort <beerbarrel@cox.net> wrote:
<snip>
> Sounds good to me, but I'd first take a look at figuring out
> exactly what it was meant to do in the first place, and see if
> that isn't more interesting that using the parts for something
> else.
>
If you do decide to strip it out, there is an excellent 723 based design in
the ARRL handbook.

I built a 12v 100A version of the RF proof 24V supply. That circuit was not
in the 2002 edition, so you might want to trawl through some old issues too.

Good luck

Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

2443. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-30 23:25:54 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v8ev8gk8f5cg67@corp.supernews.com>
Source record: 36545

> where to buy transistors, ICs and other small parts over-the-counter
in
> Washington, DC or Baltimore, MD.

Arcade Electronics in Alexandria has some parts. I get most of my
stuff via the Internet from DigiKey and Mouser these days. Place the
order on the Internet, give them your Visa or MC number and it'll be
setting on your doorstep via UPS in three or four days. Much easier
than fighting the DC area traffic.

2444. Wanted: Weller Soldering Iron

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 00:32:00 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <40Mha.6807$cO3.397091@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36546

Where can i purchase a new soldering iron for
the matching weller wtcps power unit?

2445. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 00:39:41 UTC
From: Leigh W3NLB <w3nlbREMOVETHIS@amsat.org>
Message-ID: <re3f8vkkuhcpbobbr23av2nbuv47aadg70@4ax.com>
Source record: 36447

Electronics Plus (primarily surplus and industrial) and Mark Electronics
(more service-shop oriented) both have large selections. Both located in
Beltsville, MD zip code 20705

73 de Leigh W3NLB

>I'd like to design and build some equipment, but don't know
>where to buy transistors, ICs and other small parts over-the-counter in
>Washington, DC or Baltimore, MD. Years ago, Radio Shack offered such item
>for
>sale, but the chain has now evolved into a consumer electroncs retail store.
>The selection of parts was never spectacular, but at least you could find
>one of these store near your home.
>
>So where can I go these days? I'd like to browse through the parts myself,
>and I'm reluctant to mail order stuff I haven't seen and touched.
>
>-Dave, K3WQ
>david@drumheller.org
>
>

2446. Re: Wanted: Weller Soldering Iron

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 01:05:03 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <3vMha.6873$cO3.400014@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36448

You might try http://www.contacteast.com/

||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:40Mha.6807$cO3.397091@bgtnsc04-news.ops.worldnet.att.net...
> Where can i purchase a new soldering iron for
> the matching weller wtcps power unit?

2447. Using an old radio's variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 02:37:15 UTC
From: Yap <meihoon@pl.jaring.my>
Message-ID: <b689kr$4g5$1@news4.jaring.my>
Source record: 36449

Hi all,

Recently got an old variable capacitor off a discarded walkman.
It has 6 terminals, 1 in each corner and 2 flat ones on the side.

I now know it has sections for AM and FM in the same casing.

The question is : is it possible to hook it up so that I get
a shortwave antenna tuning capacitor?

I'm worried that if I use the AM section, it won't go down low
enough to receive the shortwave frequencies.

--> Chops

2448. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 03:11:11 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18f151ad5e3cdff2989821@192.168.42.131>
Source record: 36450

In article <3e876b41_6@vienna7.his.com>, david@drumheller.org says...

> I'd like to design and build some equipment, but don't know
> where to buy transistors, ICs and other small parts over-the-counter in
> Washington, DC or Baltimore, MD. Years ago, Radio Shack offered such item
> for sale, but the chain has now evolved....

<snip>

My personal favorite is the term "degenerated." "Devolved" also
works.

Anyway... The "quality" (or lack thereof) of many of the parts that
RS still stocks is enough to turn me away.

There are three sources I currently use; Mouser, Allied, and Digi-
Key. Between the lot of them, it's a very rare item that I can't locate.

> So where can I go these days? I'd like to browse through the parts myself,
> and I'm reluctant to mail order stuff I haven't seen and touched.

No need to fear, as long as you order from a reputable dealer. The
parts I've gotten from all three sources are, as near as I can tell, top-
rate.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2449. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 04:51:31 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E87C98C.7EDC886E@earthlink.net>
Source record: 36451
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

keep-it-clean wrote:
>
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote in message
> news:3E83C388.E15D094@earthlink.net...
> >
> > (....snip....)
> >
> > The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs
> > in the Grass Valley dual Sync generator system.
>
> Not to be argumentative, but I'm wondering if the dual Sync Generator system
> you're referring to wasn't made by Telemation...not GVG ? I don't recall
> any RTL parts in early Grass Valley products, but I do recall an old 1RU
> high Telemation sync generator with beige/tan front panel and built-in
> changeover relays. Two of the boxes would've comprised a "dual sync
> generator system". Not sure if it used RTL or not (for some reason, I think
> it was TTL but it's been a long time ago)......

It was built in 1972 or 1973 and was two rack units high with two plug
in sync generator modules, two plug in power supply modules, and a plug
in changeover module. It used RTL ICs in TO-5 cans and had +12, -12, and
+3.6 volt power supplies. It was mostly discrete parts but it used RTL
to divide the crystal down to 15750 and 60 HZ then it used analog
circuits to set pulse widths. By today's standards it was a piece of
crap, but it beat the hell out of the vacuum tube sync generator it
replaced. It was 1/6 the size and only drew about 40 watts, instead of
200 watts. The Video and Pulse Distribution Amps were Grass Valley as
well, and were completely discrete parts. The power supplies were the
same as the ones for the Sync generators, minus the 3.6 volt supplies.
--

Michael A. Terrell
Central Florida

2450. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 06:04:28 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <b68lpb$1pa$1@titan.btinternet.com>
Source record: 36452

Hi Tracy, all,
"Tracy Fort" <beerbarrel@cox.net> wrote in message
news:kijc8v8oqj9mjgehliru5fhhiteqpdlcgf@4ax.com...
> I did that..I used a 1.6uf and the voltage went up about 1.5
> volts...That explains the lack of a rectifier bridge. It has two
> diodes with a cap across them. The output looks to me like it has AC
> in it. The meter reading is steady but it has that graphical bar under
> the readout that bounces up and down...
>
> I will be using the supply with a hf transceiver that has a 100 watt
> output. I thought that I might build another circuit board and use the
> existing transformer. It is in a pretty neat housing that could be
> reused...
>
> Tracy
>
Don't use this unit to power your radio, it's protection circuits are some
what suspect.
By all means use the transformer for a home brew PSU (it sounds ideal).
If you want a good circuit for a PSU (up to 40 amps) with FULL protection
let me know your address off list and I will send you it (I have used this
design for the last fifteen years or so on
lots of supplies I have build for other folk and not one person has had a
problem..cheers,
Ken, G4KIR.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.465 / Virus Database: 263 - Release Date: 25/03/2003

2451. Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 09:23:55 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b691bv$28m5d$1@ID-150848.news.dfncis.de>
Source record: 36453

It seems, but I don't really know, that in the main RX's and TX's use one SSB filter, the carrier frequency being moved over from one side of the filter passband to the other. The actual center frequency of the filter is 455 Khz (for 455 Khz filters, that is).

It seems therefore that using two filters is less common. That is a seperate filter for each sideband. Here, the filter's stated frequency is not the actual center frequency, but the carrier frequency. So, for the Collins 455 Khz LSB filters, the actual center frequency is above 455 Hhz, USB filter, center frequency is lower.

Now Collins/Rockwell make symmetrical filters. What are these for? And, are the sideband filters not symmetrical in their passband? TIA. Rich.

2452. 2M CW Xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 15:46:04 UTC
From: Tim Marek <timm@cccomm.net>
Message-ID: <v8gom4s92r6jc9@corp.supernews.com>
Source record: 36454

Morning!

I am looking for info on building xtal controlled CW transmitters for 50, 144, 222, & 432 Mhz.

They will be used as CW beacons that runs continuously atop a mtn here in DM09.

The ideal power level would be 5 to 10 watts. Any help out there?

Thanks!

73s de Tim - K7XC - DM09ol... sk

Reply directly to K7XC1@yahoo.com

--
June 2003 VHF QSO Party - K7XC Single Op - DM17 - ABCDE
Where will you be in June?

2453. Re: Using an old radio's variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 18:13:34 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303311013.7658abaa@posting.google.com>
Source record: 36456

"Yap" <meihoon@pl.jaring.my> wrote in message news:<b689kr$4g5$1@news4.jaring.my>...
> Hi all,
>
> Recently got an old variable capacitor off a discarded walkman.
> It has 6 terminals, 1 in each corner and 2 flat ones on the side.
>
> I now know it has sections for AM and FM in the same casing.
>
> The question is : is it possible to hook it up so that I get
> a shortwave antenna tuning capacitor?
>
> I'm worried that if I use the AM section, it won't go down low
> enough to receive the shortwave frequencies.

"Shortwave antenna tuning" is a pretty nebulous description of what you want to do. What sort of antenna? What sort of tuning--what do you want the tuner to do and why? What frequency range? Do you have a circuit configuration in mind? And I assume this is for receiving, or VERY low power transmitting.

Tuning to me implies resonating. What inductance do you want to resonate? Inductance in the antenna's impedance, or in a coil in some sort of preselector? If it's the latter, you should be able to wind a coil (or coils) which will resonate with the capacitor you have. Then it's a problem of using that in a circuit which accomplishes the goal you have in mind. You should first find out what the capacitance range of each section is, though. I suppose there are probably four capacitor sections, and likely each has a different range.

Cheers,
Tom

2454. Antenna Tuning Unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 18:18:34 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <b6a0prpcb1@julia.coi.pw.edu.pl>
Source record: 36457

Good evening! (in Europe, of course)

Recently I have caught an idea of building an automatic antena tuner. I have also some questions about this. The first is about the idea how it should work. Do I measure the amplitude at the output and set the capacitors and inductors to obtain maximum amplitude? In some design I have noticed there were two variable capacitors and switched inductors. It makes three variable devices altogether, so what is the algorithm of setting them?

Thanks in advance!
--
Paweďż˝ Stobiďż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

2455. Automatic antenna tuning unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 18:21:13 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <b6a0utpdi1@julia.coi.pw.edu.pl>
Source record: 36458

Good evening! (in Europe, of course)

Recently I have caught an idea of building an automatic antena tuner. I have
also some questions about this. The first is about the idea how it should
work. Do I measure the amplitude at the output and set the capacitors and
inductors to obtain maximum amplitude? In some design I have noticed there
were two variable capacitors and a switched inductor. It makes three
variable
devices altogether, so what is the algorithm of setting them?

Thanks in advance!
--
Paweďż˝ Stobiďż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

2456. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 18:41:48 UTC
From: Jasper Janssen <jasper@jjanssen.org>
Message-ID: <iu2h8vo60dfppkvodjqorgl2ktsavuiabl@4ax.com>
Source record: 36459
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Tue, 28 Jan 2003 21:33:55 -0500, Technician <travis57@megalink.net>
wrote:

>Slightly off on a tangent here, but has anybody else noticed that in
>Win98, if you create a new shortcut (Richt-click --> New --> Shortcut),
>that the picture to the left shows the Win95 start menu?
>
>And its still there in second edition. Don't tell me that windows is not
>programed in the copy & paste method.

It's not, or at least this isn't evidence of it. It's programmed in the
"alter only the bits that need altering" method.

Now if you found win3.11 in 9x, or 9x in NT, that'd be evidence of c/p
programming.

Jasper

2457. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 18:57:04 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <t14h8vsnov77g3r47r52jn9h9h3n06465s@4ax.com>
Source record: 36460

Ken,
That would be much appreciated....

send to:

beerbarrel@nospamcox.net

The transformer is 25 or 30 amp 18-0-18...

I would really like to build my own supply versus buying one. Sent you
two emails but they bounced. Just remove the nospam in mine.

thanks for your reply,

Tracy

On Mon, 31 Mar 2003 06:04:28 +0000 (UTC), "K.chattenton"
<k.chattenton@btopenwold.com> wrote:

>Hi Tracy, all,
>"Tracy Fort" <beerbarrel@cox.net> wrote in message
>news:kijc8v8oqj9mjgehliru5fhhiteqpdlcgf@4ax.com...
>> I did that..I used a 1.6uf and the voltage went up about 1.5
>> volts...That explains the lack of a rectifier bridge. It has two
>> diodes with a cap across them. The output looks to me like it has AC
>> in it. The meter reading is steady but it has that graphical bar under
>> the readout that bounces up and down...
>>
>> I will be using the supply with a hf transceiver that has a 100 watt
>> output. I thought that I might build another circuit board and use the
>> existing transformer. It is in a pretty neat housing that could be
>> reused...
>>
>> Tracy
>>
>Don't use this unit to power your radio, it's protection circuits are some
>what suspect.
>By all means use the transformer for a home brew PSU (it sounds ideal).
>If you want a good circuit for a PSU (up to 40 amps) with FULL protection
>let me know your address off list and I will send you it (I have used this
>design for the last fifteen years or so on
>lots of supplies I have build for other folk and not one person has had a
>problem..cheers,
>Ken, G4KIR.
>
>
>---

>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.465 / Virus Database: 263 - Release Date: 25/03/2003
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2458. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 19:49:49 UTC
From: "Chris Cox, N0UK c c o x at u h c dot c o m" <spammers.c@n.bugger.off>
Message-ID: <b6a64t$8e1$1@gabriel.uhc.com>
Source record: 36461

Given that it is really a battery charger, do you have a 12V lead acid battery
across its output?

The battery will act as a reasonable "regulator" and probably allow you to
use the charger as it is.

--
Chris Cox, N0UK/G4JEC NIC Handle: CC345
UnitedHealthGroup, Inc., MN10-W116, UNIX Services & Consulting
6300 Olson Memorial Highway, Golden Valley, MN 55427
email: ccox@uhc.com (work) chrisc@chris.org (home)

2459. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 19:57:43 UTC
From: Tracy Fort <beerbarrel@NOSPAMcox.net>
Message-ID: <eh7h8vg6hcfh7f2mc8hcdiid0fvkh5der7@4ax.com>
Source record: 36462

No I don't...someone else mentioned that too. I thought about putting
one across the terminals to see the results but have not as of yet. I
need to put the supply in the house and was kind of leary about
putting the battery in the house. Plus, the wife would shoot me.

Tracy

On Mon, 31 Mar 2003 19:49:49 +0000 (UTC), "Chris Cox, N0UK" c c o x
at u h c dot c o m <spammers.c@n.bugger.off> wrote:

>Given that it is really a battery charger, do you have a 12V lead acid battery
>across its output?
>
>The battery will act as a reasonable "regulator" and probably allow you to
>use the charger as it is.

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2460. Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 19:58:11 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303311158.acc94c5@posting.google.com>
Source record: 36463

Hi all,

Anyone have pointers on where to buy small quantities of small
semirigid coax at a reasonable price?

Cheers,
Tom

2461. make money fast and easy!!!

service. You are in the business of developing Mailing Lists. Many large corporations are happy to pay big bucks for quality lists. However, the money made from the mailing lists is secondary to the income which is made from people like you and me asking to be included in that list.

~~~>HERE ARE 4 EASY STEPS TO GET STARTED<~~~

STEP 1: Get 6 separate pieces of paper and write the following on each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelope (Please make sure that the bill wouldn't be noticed in the envelope to prevent thievery). Send out US $ DOLLAR, so it would be more acceptable.

STEP 2: Next, place one paper in each of the 6 envelopes and seal them properly. You should now have 6 sealed envelopes, each with a piece of paper stating the phrase, "PLEASE PUT ME ON YOUR MAILING LIST.", your name and address, and a $1.00 bill.

What you are doing is creating a service. THIS IS ABSOLUTELY LEGAL! You are requesting for a legitimate service and you are paying for it! Like most of us, I was a little skeptical and a little worried about the legal aspects of it all. So I checked it out with the U.S. Post Office (1-800-725-2161) and they confirmed that it is indeed legal!

Mail the 6 envelopes to the following addresses below:

#1)B. Hooper ; 3 Warringah Gve.
Petrie, QLD, Australia 4502

#2)Matthew Speight ; 6 Charnwood Ave.
Belfast , N. Ireland : BT15 5DH

#3)Ahmad Mujeeb ; 307-14 15 st, NW,
Charlottesville, VA, USA, 22903

#4)Rostum Hernandez ; #2 Jericho St.,
Victoriaville Subd. ,Antipolo City,
Phillippine, 1870

#5)R.Pena ; 1962 46St. S.W.,
Naples , FL., USA, 34116

#6)sara siemon
9245 lower valley pike
new carlisle,oh 45344

STEP 3: Now take the #1 name off the list that you see above, move the other names up (6 becomes 5, 5 becomes 4, etc...) and add YOUR Name as number 6 on the list.

STEP 4: Copy this article. Change anything you need to, but try to keep this article as close to original as possible. Now, post your amended article to at least 200 newsgroups. (I think there are close to 2.4million groups) All you
~~~

need is 200, but remember, the more you post, the more money you make! This is perfectly legal! If you have any doubts, refer to Title 18, Section 1302 and 1341, US Postal and Lottery Laws or Title 18, Section 3005 in the US code, also in the code of Federal regulations, Volume 16, Sections 255 and 436, which states; "a product or service must be exchanged for money received." The simple note in the letter, "PLEASE PUT ME ON YOUR MAILING LIST", makes it legal because you are paying for exchange of a service, (adding the purchasers name to his mailing list) for a $1.00 fee.
: Keep a copy of these steps for yourself and, whenever you need money, you can use it again, and again. PLEASE REMEMBER that this program remains successful because of the honesty and integrity of the participants and by their carefully adhering to the directions. Look at it this way. If you are of integrity, the program will continue and the money that so many others have received will come your way.

NOTE: You may want to retain every name and address sent to you, either on a computer or hard copy and keep the notes people send you. This VERIFIES that you are truly providing a service. (Also, it might be a good idea to wrap the $1 bill in dark paper to reduce the risk of mail theft.) So, as each post is downloaded and the directions carefully followed, six members will be reimbursed for their participation as a List Developer with one dollar each. Your name will move up the list geometrically so that when your name reaches the #1 position you will be receiving thousands of dollars in CASH!!! What an opportunity for only $6.00 ($1.00 for each of the first six people listed above) Send it now, add your own name to the list and you're in business!

~~~>DIRECTIONS FOR HOW TO POST TO NEWSGROUPS<~~

Step 1) You do not need to re-type this entire letter to do your own posting. Simply put your mouse cursor at the beginning of this letter, click and drag your cursor to the bottom of this document, right click and select 'copy' from the edit menu. This will copy the entire letter into the computer's memory.

Step 2) Open a blank 'notepad' file and place your mouse cursor at the top of the blank page. Right click and from the 'edit' menu select 'paste'. This will paste a copy of the letter into notepad so that you can add your name and postal address to the list.

Step 3) Save your new notepad file as a .txt file. If you want to do your postings in different settings, you'll always have this file to go back to.

Step 4) Use Netscape or Internet explorer and try searching for various newsgroups (on-line forums, message boards, chat sites, discussions.)You can post anywhere!!! There are tons of free bulletin boards if you just look for them!!

Step 5) Visit these message boards and post this article as a new message by highlighting the text of this letter and selecting paste from the edit menu. Fill in the Subject, this will be the header that everyone sees as they scroll through the list of postings in a particular group, click the "post" message button. You're done with your first one!
NOTE: Please don't SPAM or send unsolicited emails. It's completely illegal.
~~~

Send emails to all the people you know or any ways that allows you to, instead of SPAMMING.(Just a reminder).

Congratulations...THAT'S IT! All you have to do is jump to different newsgroups and post away, after you get the hang of it, it will take about a minute for each newsgroup! **REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL MAKE!! BUT YOU HAVE TO POST A MINIMUM OF 200** That's it! You will begin receiving money from around the world within days! You may eventually want to rent a P.O.Box due to the large amount of mail you will receive. If you wish to stay anonymous, you can invent a name to use, as long as the postman will deliver it. **JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT.**

*Now the WHY part; Out of 200 postings, say I receive only 5 replies (a very low example). So then I made $5.00 with my name at #6 on the letter. Now, each of the 5 persons who just sent me $1.00 make the MINIMUM 200 postings, each with my name at #5 and only 5 persons respond to each of the original 5, that is another $25.00 for me, now those 25 each make 200 MINIMUM posts with my name at #4 and only 5 replies each, I will bring in an additional $125.00! Now, those 125 persons turn around and post the MINIMUM 200 with my name at #3 and only receive 5 replies each, I will make an additional $626.00! OK, now here is the fun part, each of those 625 persons post a MINIMUM 200 letters with my name at #2 and they each only receive 5 replies, that just made me $3,125.00!!! Those 3,125 persons will all deliver this message to 200 newsgroups with my name at #1 and if still ONLY 5 persons per 200 newsgroups react I will receive $15,625,00! With an original investment of only $6.00! AMAZING! When your name is no longer on the list, you just take the latest posting in the newsgroups, and send out another $6.00 to names on the list, putting your name at number 6 again. And start posting again. The thing to remember is: do you realize that thousands of people all over the world are joining the internet and reading these articles everyday?, JUST LIKE YOU are now!! So, can you afford $6.00 and see if it really works?? I think so... People have said, "what if the plan is played out and no one sends you the money? So what! What are the chances of that happening when there are tons of new honest users and new honest people who are joining the internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with thousands of those joining the actual internet!!! REMEMBER, PLAY FAIRLY AND HONESTLY AND THIS WILL WORK FOR YOU!!!

2462. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 20:04:41 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <oj7h8vo4c6dqeeunq5ua6k368d7fd2iprp@4ax.com>
Source record: 36465

On Mon, 31 Mar 2003 19:57:43 GMT, Tracy Fort
<beerbarrel@NOSPAMcox.net> wrote:

>No I don't...someone else mentioned that too. I thought about putting
>one across the terminals to see the results but have not as of yet. I
>need to put the supply in the house and was kind of leary about
>putting the battery in the house. Plus, the wife would shoot me.
>
Besides any harm caused by your wife shooting you, a lead-acid battery
gives off fumes from (and could spill) sulfuric acid, which could
damage many things in your house, including occupants. I wouldn't have
it any more inside than a garage or shed.

Think on a remote mount with just the power lead running to your shack
area.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2463. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 20:22:28 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87he9jp9q3.fld@barrow.com>
Source record: 36466

Tracy Fort <beerbarrel@NOSPAMcox.net> wrote:
>No I don't...someone else mentioned that too. I thought about putting
>one across the terminals to see the results but have not as of yet. I
>need to put the supply in the house and was kind of leary about
>putting the battery in the house. Plus, the wife would shoot me.
>
>Tracy

Test it first. But if it works as desired you can buy an
appropriate battery box to safely store a battery in. This is
almost identical to a UPS except you don't convert the 12 VDC to
115 VAC to use it. The battery is certainly no more danger than
the battery in a UPS powering your computer (or a battery
powering an emergency lighting unit, as another example).

Batteries are *very* good filters, which is why the unit has
such horrible filtering with no battery attached. You won't
need to add any capacitors if you put a battery on it. The
regulation will also be much better, with 12 VDC probably being
the minimum, and perhaps 14 VDC being the worst case maximum.
However, the 12 to 14 VDC varies with the charge in the battery,
so it might change over several hours (and of course could go
below 12 VDC if no charging current is present). The regulation
over a period of seconds or fractions of seconds with load
variations will be very small (fractions of a volt).

If your unit is actually designed to do that it would be a shame
to part it out just to get the transformer. Sell it to someone
that can use it, and either buy a transformer or buy a plain old
battery charger to get the transformer from it.

>On Mon, 31 Mar 2003 19:49:49 +0000 (UTC), "Chris Cox, N0UK" c c o x
>at u h c dot c o m <spammers.c@n.bugger.off> wrote:
>
>>Given that it is really a battery charger, do you have a 12V lead acid battery
>>across its output?
>>
>>The battery will act as a reasonable "regulator" and probably allow you to
>>use the charger as it is.
>
>Tracy Fort
>
>KE4ODD
>
>beerbarrel@cox<NOSPAM>.net

>
>remove <NOSPAM> for repliess

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2464. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 20:38:27 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87d6k7p8zg.fld@barrow.com>
Source record: 36467

Gary S. <Idontwantspam@net> wrote:
>On Mon, 31 Mar 2003 19:57:43 GMT, Tracy Fort
><beerbarrel@NOSPAMcox.net> wrote:
>
>>No I don't...someone else mentioned that too. I thought about putting
>>one across the terminals to see the results but have not as of yet. I
>>need to put the supply in the house and was kind of leary about
>>putting the battery in the house. Plus, the wife would shoot me.
>>
>Besides any harm caused by your wife shooting you, a lead-acid battery
>gives off fumes from (and could spill) sulfuric acid, which could
>damage many things in your house, including occupants. I wouldn't have
>it any more inside than a garage or shed.

You've never heard of sealed batteries?

You've all seen those little boxes with emergency lights in
every store in the country? You've all seen those nice little
UPS boxes that keep your computer from crashing when the power
fails? Got a burglar alarm system? Or a fire alarm system?
They *all* use sealed lead acid batteries.

You get the idea. Even the battery in your car is unlikely to
be able to spill acid or give off fumes.

>Think on a remote mount with just the power lead running to your shack
>area.

Ohmic losses become excessive...

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2465. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 20:47:19 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <9aah8vk6t62149spubramfurfi05kk4e9d@4ax.com>
Source record: 36468

On Mon, 31 Mar 2003 10:23:55 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>It seems, but I don't really know, that in the main RX's and TX's
>use one SSB filter, the carrier frequency being moved over from
>one side of the filter passband to the other. The actual center
>frequency of the filter is 455 Khz (for 455 Khz filters, that
>is).
>
>It seems therefore that using two filters is less common. That
>is a seperate filter for each sideband. Here, the filter's
>stated frequency is not the actual center frequency, but the
>carrier frequency. So, for the Collins 455 Khz LSB filters, the
>actual center frequency is above 455 Hhz, USB filter, center
>frequency is lower.
>
>
>Now Collins/Rockwell make symmetrical filters. What are these
>for? And, are the sideband filters not symmetrical in their
>passband? TIA. Rich.

The stated center frequency of a filter is usually the actual center
of the filter unless they are stated as upper or lower side band
filters.

The situation with Collins 455 khz filters is that is the center
frequency (455) khz. The carrier is set to one edge or the other for
upper or lower side band operation. That puts the side band energy in
the center of the filter.

Yes they are symmetrical filters.

Switching the carrier from one side to the other and using the same
filter is less expensive than having two filters.

There are some schemes that allow switching side bands without moving
the carrier to the other side of the filter. Look at a schematic of
the SBE 33 or SBE 34 transceiver. It uses a single 455 khz filter and
one crystal. The crystal is set at 453?? something to put it off to
the side to generate upper side band. Then the output of the 453 khz
crystal is also fed to a multiplier stage and to a mixer that is also
fed by the output of the filter. There is an intermediate IF of around
1.8 mhz if I remember. The multiplier stage for the 453 signal is
either multiplied 3 times or 5 times? That puts the input to the mixer
either above or below the 1.8 mhz IF. That will give either upper or
lower side band out of the 1.8 mhz mixer with the same carrier

frequency.
The only thing that is needed to select side bands is to select a couple of tuned circuits in the multiplier to be tuned to either 1359 khz or to 2265 khz. Works well.

73
Gary K4FMX

2466. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 20:55:17 UTC
From: Tracy Fort <beerbarrel@NOSPAMcox.net>
Message-ID: <fsah8vkahujf9rjgnnpb4j87apuvj2pa3f@4ax.com>
Source record: 36469

You know actually I forgot about those litte units and I think I even
have one of those guys around. I was thinking of the larger automotive
type batteries. I know that even though they are sealed units they do
contain a vent unless you get one of those spiral wound jobs...

Tracy

On 31 Mar 2003 11:38:27 -0900, Floyd Davidson <floyd@ptialaska.net>
wrote:

>Gary S. <Idontwantspam@net> wrote:
>>On Mon, 31 Mar 2003 19:57:43 GMT, Tracy Fort
>><beerbarrel@NOSPAMcox.net> wrote:
>>
>>>No I don't...someone else mentioned that too. I thought about putting
>>>one across the terminals to see the results but have not as of yet. I
>>>need to put the supply in the house and was kind of leary about
>>>putting the battery in the house. Plus, the wife would shoot me.
>>>
>>Besides any harm caused by your wife shooting you, a lead-acid battery
>>gives off fumes from (and could spill) sulfuric acid, which could
>>damage many things in your house, including occupants. I wouldn't have
>>it any more inside than a garage or shed.
>
>You've never heard of sealed batteries?
>
>You've all seen those little boxes with emergency lights in
>every store in the country? You've all seen those nice little
>UPS boxes that keep your computer from crashing when the power
>fails? Got a burglar alarm system? Or a fire alarm system?
>They *all* use sealed lead acid batteries.
>
>You get the idea. Even the battery in your car is unlikely to
>be able to spill acid or give off fumes.
>
>>Think on a remote mount with just the power lead running to your shack
>>area.
>
>Ohmic losses become excessive...

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2467. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 21:16:26 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <874r5jp785.fld@barrow.com>
Source record: 36470

Tracy Fort <beerbarrel@NOSPAMcox.net> wrote:
>You know actually I forgot about those litte units and I think I even
>have one of those guys around. I was thinking of the larger automotive
>type batteries. I know that even though they are sealed units they do
>contain a vent unless you get one of those spiral wound jobs...
>
>Tracy

A typical car battery today will not vent fumes under the normal
circumstances that you would be using it. That vent will,
however, certainly keep it from exploding if you put it in trash
barrel and try to burn it...

The key is to look for a "maintenance free" battery. If you can't
put water into the cells, then the battery necessarily cannot let
fumes escape either (because the corrective action would be to add
water, which can't be done on sealed batteries).

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2468. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 22:05:17 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b6ae2t$3jh$1@freenet9.carleton.ca>
Source record: 36471

Gary Schafer (gaschafer@attbi.com) writes:
>[stuff deleted]
> Switching the carrier from one side to the other and using the same
> filter is less expensive than having two filters.
>
> There are some schemes that allow switching side bands without moving
> the carrier to the other side of the filter. Look at a schematic of
> the SBE 33 or SBE 34 transceiver. It uses a single 455 khz filter and
> one crystal. The crystal is set at 453?? something to put it off to
> the side to generate upper side band. Then the output of the 453 khz
> crystal is also fed to a multiplier stage and to a mixer that is also
> fed by the output of the filter. There is an intermediate IF of around
> 1.8 mhz if I remember. The multiplier stage for the 453 signal is
> either multiplied 3 times or 5 times? That puts the input to the mixer
> either above or below the 1.8 mhz IF. That will give either upper or
> lower side band out of the 1.8 mhz mixer with the same carrier
> frequency.
> The only thing that is needed to select side bands is to select a
> couple of tuned circuits in the multiplier to be tuned to either 1359
> khz or to 2265 khz. Works well.
>
> 73
> Gary K4FMX

That's straight out of "A Sideband Package" by George Bigler in
QST for June 1958. I have no idea if he got the scheme from elsewhere,
but this was a pretty popular homebrew rig, and I've seen other construction
articles using the same sideband selection scheme, and they attribute it
to Bigler's article.

The second IF is 2.25MHz. The carrier oscillator is doubled, then either
doubled again (to provide 1.8MHz) or tripled (to get 2.7MHz).

This setup would work better in a transmitter than a receiver.
In a transmitter, you've got a controlled situation, so if a spurious
signal is generated, you can just notch it out. Putting it in a receiver
(as Bigler suggests) means you're back to a situation where there will
be limited selectivity at the first IF, and there goes your signal
handling and image rejection specs. Of course, back when he wrote the
article, such a scheme of a few tuned circuits at the first IF was
common. Now, you'd want a crystal filter at that first IF, and
then comes the issue of getting one at a frequency where everything
lines up. It is simpler to move back to two separate injection
crystals for the conversion to the final IF, and switch between
them to provide for inversion or no inversion.

SOmeone updated the Bigler sideband selection scheme in Ham Radio magazine in the early seventies. Instead of multiplying, he used a higher frequency crystal, and divided down.

Michael VE2BVW

2469. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 22:12:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8hfb0lirqc13b@corp.supernews.com>
Source record: 36472

Using a charger intended to charge an automotive battery, to float a sealed battery, is likely to ruin the sealed battery for a couple of reasons. One is that the maximum charge current might exceed the rated charge current of the sealed battery. The second is that the float voltage required for long battery life will be lower than the voltage used to recharge or top up an automotive type battery. This will result in constant overcharge and a short battery life. Even if you use an automotive battery, the charger voltage is likely to be too high for sustained float operation. The result will be that the battery will vent hydrogen gas, and battery life will be very short.

There was a Wizard of Id cartoon hung on our bathroom wall for a number of years. The Wizard's unattractive (to be charitable) wife Blanch was at the hairdresser's. Blanch: "I'm going to the royal ball tonight, Pierre, and I want to be the most beautiful woman there. What do you recommend?" Pierre: "Reincarnation."

I think that's your solution. Use the transformer to build a proper supply.

Roy Lewallen, W7EL

Floyd Davidson wrote:
> Tracy Fort <beerbarrel@NOSPAMcox.net> wrote:
>
>>You know actually I forgot about those litte units and I think I even
>>have one of those guys around. I was thinking of the larger automotive
>>type batteries. I know that even though they are sealed units they do
>>contain a vent unless you get one of those spiral wound jobs...
>>
>>Tracy
>
>
> A typical car battery today will not vent fumes under the normal
> circumstances that you would be using it. That vent will,
> however, certainly keep it from exploding if you put it in trash
> barrel and try to burn it...
>
> The key is to look for a "maintenance free" battery. If you can't
> put water into the cells, then the battery necessarily cannot let
> fumes escape either (because the corrective action would be to add
> water, which can't be done on sealed batteries).
>

2470. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 22:37:02 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87vfxznoxd.fld@barrow.com>
Source record: 36473

Roy Lewallen <w7el@eznec.com> wrote:
>Using a charger intended to charge an automotive battery, to float a
>sealed battery, is likely to ruin the sealed battery for a couple of

"Sealed battery" does not exclude "automotive battery". What
you meant to say was that if the charger cannot be adjusted,
then it must only be used on the type and size of battery for
which it was designed.

But then that was the reason for suggesting that Tracy figure
out exactly what this device *is* designed for before tearing up
a very useful piece of equipment to make a pile of junk.

>reasons. One is that the maximum charge current might exceed the rated
>charge current of the sealed battery. The second is that the float
>voltage required for long battery life will be lower than the voltage
>used to recharge or top up an automotive type battery. This will result
>in constant overcharge and a short battery life. Even if you use an
>automotive battery, the charger voltage is likely to be too high for

Nobody has suggested floating a battery at the boost charge
rate. That is absurd.

>sustained float operation. The result will be that the battery will vent
>hydrogen gas, and battery life will be very short.

You'd best never turn your transmitter on then, because if you
allow it to draw too much current, it will vent blue smoke and
have a very short life.

>There was a Wizard of Id cartoon hung on our bathroom wall for a number
>of years. The Wizard's unattractive (to be charitable) wife Blanch was
>at the hairdresser's. Blanch: "I'm going to the royal ball tonight,
>Pierre, and I want to be the most beautiful woman there. What do you
>recommend?" Pierre: "Reincarnation."
>
>I think that's your solution. Use the transformer to build a proper supply.

Why not figure out what the device is first. Sounds like that
transmitter you should never turn on might be a good source of
transistors for the next code practice oscillator you want to
build, eh?

Don't you think a little common sense should be used instead of
ignorantly destroying things?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2471. Re: Automatic antenna tuning unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 22:51:58 UTC
From: jgboyles@aol.com
Message-ID: <20030331175158.23178.00000497@mb-fh.aol.com>
Source record: 36474

>Recently I have caught an idea of building an automatic antena tuner. I have
>also some questions about this. The first is about the idea how it should
>work. Do I measure the amplitude at the output and set the capacitors and
>inductors to obtain maximum amplitude? I

73 Gary N4AST

2472. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:16:08 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <qkih8v8umf6l18fuab80b7cje31jfamhs6@4ax.com>
Source record: 36475

On 31 Mar 2003 11:38:27 -0900, Floyd Davidson <floyd@ptialaska.net>
wrote:

>Gary S. <Idontwantspam@net> wrote:

>>Besides any harm caused by your wife shooting you, a lead-acid battery
>>gives off fumes from (and could spill) sulfuric acid, which could
>>damage many things in your house, including occupants. I wouldn't have
>>it any more inside than a garage or shed.
>
>You've never heard of sealed batteries?
>
Those are fine, as they are designed for that sort of use. His earlier
post didn't distinguish and it seemed like he was going to use a car
battery.

You are right, I should have mentioned those as the alternative.

>You get the idea. Even the battery in your car is unlikely to
>be able to spill acid or give off fumes.

Unlikely, but if it does, sulfuric acid fumes do interesting things to
nylon and some other plastics.

>>Think on a remote mount with just the power lead running to your shack
>>area.
>
>Ohmic losses become excessive...

Depends on your power needs for the radio, but the majority of
circuits in your house are rated 15 or 20 amps. You could upgrade to
12 or even 10 gauge wiring, which would work fine in many situations.

Anything like this should be done by a licensed electrician, or at
least to NEC standards.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2473. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:25:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8hjjaros0o75d@corp.supernews.com>
Source record: 36476

I agree with all you've said, with the exception of the statement about never turning a transmitter on, which I didn't understand.

I assumed by the statement about the supply's use for an RV that it was probably intended for normal cyclic battery charging rather than float charging. And of course vehicle-sized sealed batteries are available, but since the ones I've seen easily cost as much as or more than a power supply, it never occurred to me that this would be a viable option. And, finally, I interpreted the suggestions about getting and using a battery, and the allusions to a UPS, as suggesting float operation. I didn't think that he would be interested in connecting the charger only occasionally and monitoring the charge.

So, given that my assumptions were apparently incorrect, I apologize.

Roy Lewallen, W7EL

Floyd Davidson wrote:
> Roy Lewallen <w7el@eznec.com> wrote:
>
>>Using a charger intended to charge an automotive battery, to float a
>>sealed battery, is likely to ruin the sealed battery for a couple of
>
>
> "Sealed battery" does not exclude "automotive battery". What
> you meant to say was that if the charger cannot be adjusted,
> then it must only be used on the type and size of battery for
> which it was designed.
>
> But then that was the reason for suggesting that Tracy figure
> out exactly what this device *is* designed for before tearing up
> a very useful piece of equipment to make a pile of junk.
>
>
>>reasons. One is that the maximum charge current might exceed the rated
>>charge current of the sealed battery. The second is that the float
>>voltage required for long battery life will be lower than the voltage
>>used to recharge or top up an automotive type battery. This will result
>>in constant overcharge and a short battery life. Even if you use an
>>automotive battery, the charger voltage is likely to be too high for
>
>
> Nobody has suggested floating a battery at the boost charge
> rate. That is absurd.
>

>
>>sustained float operation. The result will be that the battery will vent
>>hydrogen gas, and battery life will be very short.
>
>
> You'd best never turn your transmitter on then, because if you
> allow it to draw too much current, it will vent blue smoke and
> have a very short life.
>
>
>>There was a Wizard of Id cartoon hung on our bathroom wall for a number
>>of years. The Wizard's unattractive (to be charitable) wife Blanch was
>>at the hairdresser's. Blanch: "I'm going to the royal ball tonight,
>>Pierre, and I want to be the most beautiful woman there. What do you
>>recommend?" Pierre: "Reincarnation."
>>
>>I think that's your solution. Use the transformer to build a proper supply.
>
>
> Why not figure out what the device is first. Sounds like that
> transmitter you should never turn on might be a good source of
> transistors for the next code practice oscillator you want to
> build, eh?
>
> Don't you think a little common sense should be used instead of
> ignorantly destroying things?
>

2474. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:30:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6aiv0$3e26u$1@ID-150848.news.dfncis.de>
Source record: 36477

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:9aah8vk6t62149spubramfurfi05kk4e9d@4ax.com...
> On Mon, 31 Mar 2003 10:23:55 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:

> >Now Collins/Rockwell make symmetrical filters. What are these
> >for? And, are the sideband filters not symmetrical in their
> >passband? TIA. Rich.
>
>
> The stated center frequency of a filter is usually the actual
center
> of the filter unless they are stated as upper or lower side
band
> filters.

Yes, so the Collins 455 Khz USB and LSB filters have different
center frequencies. 455 Khz refers to carrier
frequency.

> The situation with Collins 455 khz filters is that is the
center
> frequency (455) khz. The carrier is set to one edge or the
other for
> upper or lower side band operation. That puts the side band
energy in
> the center of the filter.

This is just for the symmetrical filter, ie, *not* stated as
being a LSB or USB SSB filter. I guess this filter is for when
you move the carrier into correct position, as contrasted with
keeping the carrier at 455 Khz and swapping filters.

2475. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:33:46 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87pto7nmat.fld@barrow.com>
Source record: 36478

Gary S. <Idontwantspam@net> wrote:
>On 31 Mar 2003 11:38:27 -0900, Floyd Davidson <floyd@ptialaska.net>
>wrote:
>>>Think on a remote mount with just the power lead running to your shack
>>>area.
>>
>>Ohmic losses become excessive...
>
>Depends on your power needs for the radio, but the majority of
>circuits in your house are rated 15 or 20 amps. You could upgrade to
>12 or even 10 gauge wiring, which would work fine in many situations.

There is a *huge* difference between a couple volts drop when
the circuit is powered with 120 VAC, a couple volts drop when
the circuit is 12 VDC.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2476. Re: Automatic antenna tuning unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:50:14 UTC
From: jgboyles@aol.com
Message-ID: <20030331185014.23143.00000469@mb-fh.aol.com>
Source record: 36479

>73 Gary N4AST

I don't know what happened there. Concerning an automatic antenna tuner, there are various commericial units available that work quite well. They use different sensors and algorithms to make them work.

One method that I have been experimenting with involves a capacitive voltage divider, and a torroid rf current pickup to sample V and I to the antenna. Use an op-amp ratio detector to determine when the Z is 50 ohms, (or 75 or whatever), and use a phase detector to determine whether the antenna system is Inductive or Capacitive. Armed with this information, we have Z at some angle, which translates to R+-jX for the system.
If we know R and X for the antenna system, that can be plotted on a Smith Chart, and it can be shown that a re-configurable L network with a single variable inductor, and variable capacitor (with sufficient range) will match anything to anything.
The tuning strategy or algorithm can be deduced from the various steps on the Smith chart to obtain the desired match. This is one of many ways.
The small commercial device I have uses a Pi network, with a phase detector, Z detector, and a reflected power detector. Works good, algorithm is propriety.
73 Gary N4AST

2477. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-03-31 23:53:55 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87llyvnld8.fld@barrow.com>
Source record: 36480

Roy Lewallen <w7el@eznec.com> wrote:
>I assumed by the statement about the supply's use for an RV that it was
>probably intended for normal cyclic battery charging rather than float
>charging.

If it has a separate supply line for a radio (as Tracy
described), it appears that this unit might well be intended to
be plugged in for continuous duty whenever AC is available. That
would require that it float the battery rather than just give it
a maximum charge. Even the vehicle's charging system floats the
battery when it is fully charged... they just figure on 5 years
of battery life rather than the 20+ years that other applications
(say a battery backup system for a repeater) might have.

>And of course vehicle-sized sealed batteries are available,
>but since the ones I've seen easily cost as much as or more than a power
>supply, it never occurred to me that this would be a viable option. And,

I was under the impression that most vehicle batteries today are
one type or another of a sealed, maintenance free battery. I
know that I haven't put water into a car battery in so many
years that I can't remember the last time I did it. I'm not
exactly a car mechanic though, so my experience might be odd and
not really indicative. ;-)

>finally, I interpreted the suggestions about getting and using a
>battery, and the allusions to a UPS, as suggesting float operation. I
>didn't think that he would be interested in connecting the charger only
>occasionally and monitoring the charge.

I agree with you. I'd think that plugging it in and leaving it
"forever" is probably the normal way! (I've seen some really
dead UPS batteries that have been sitting for five years that
way... :-)

>So, given that my assumptions were apparently incorrect, I apologize.

No problem. I've been putting water in telephone company
battery systems for decades (including some small earth station
equipment in the 80's that used 24 volt truck batteries no
less), so this particular stuff just kinda seems obvious to me.

On the other hand, I enjoy very much learning about a variety of
things regarding antennas, and other stuff, that I've seen you
post recently.

>Roy Lewallen, W7EL
>
>Floyd Davidson wrote:
>> Roy Lewallen <w7el@eznec.com> wrote:
>>
>>>Using a charger intended to charge an automotive battery, to float a
>>>sealed battery, is likely to ruin the sealed battery for a couple of
>>
>>
>> "Sealed battery" does not exclude "automotive battery". What
>> you meant to say was that if the charger cannot be adjusted,
>> then it must only be used on the type and size of battery for
>> which it was designed.
>>
>> But then that was the reason for suggesting that Tracy figure
>> out exactly what this device *is* designed for before tearing up
>> a very useful piece of equipment to make a pile of junk.
>>
>>
>>>reasons. One is that the maximum charge current might exceed the rated
>>>charge current of the sealed battery. The second is that the float
>>>voltage required for long battery life will be lower than the voltage
>>>used to recharge or top up an automotive type battery. This will result
>>>in constant overcharge and a short battery life. Even if you use an
>>>automotive battery, the charger voltage is likely to be too high for
>>
>>
>> Nobody has suggested floating a battery at the boost charge
>> rate. That is absurd.
>>
>>
>>>sustained float operation. The result will be that the battery will vent
>>>hydrogen gas, and battery life will be very short.
>>
>>
>> You'd best never turn your transmitter on then, because if you
>> allow it to draw too much current, it will vent blue smoke and
>> have a very short life.
>>
>>
>>>There was a Wizard of Id cartoon hung on our bathroom wall for a number
>>>of years. The Wizard's unattractive (to be charitable) wife Blanch was
>>>at the hairdresser's. Blanch: "I'm going to the royal ball tonight,
>>>Pierre, and I want to be the most beautiful woman there. What do you
>>>recommend?" Pierre: "Reincarnation."
>>>
>>>I think that's your solution. Use the transformer to build a proper supply.
>>
>>
>> Why not figure out what the device is first. Sounds like that
>> transmitter you should never turn on might be a good source of

>> transistors for the next code practice oscillator you want to
>> build, eh?
>>
>> Don't you think a little common sense should be used instead of
>> ignorantly destroying things?
>>
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2478. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 00:11:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8hm8j95cc8vac@corp.supernews.com>
Source record: 36481

Floyd Davidson wrote:
> . . .
> I was under the impression that most vehicle batteries today are
> one type or another of a sealed, maintenance free battery. I
> know that I haven't put water into a car battery in so many
> years that I can't remember the last time I did it. I'm not
> exactly a car mechanic though, so my experience might be odd and
> not really indicative. ;-)
> . . .

There's a difference between sealed and maintenance-free batteries. Maintenance-free batteries are vented and contain liquid electrolyte just like the old-fashioned non-maintenance-free types. The only difference is that something (I'm not sure what) has been done to reduce the rate of electrolyte loss. They do, however, lose electrolyte over time, and I've recovered more than one "dead" maintenance-free battery by prying off the vent covers and topping the cells up (to the bottom of the split neck) with distilled water just like we used to have to do regularly before the maintenance-free days. Maintenance-free batteries vent hydrogen gas on overcharge the same as the older types, and should only be used in a well ventilated area.

By contrast, sealed batteries are really sealed. Some at least have the electrolyte absorbed into the blotter-like separator material and don't contain liquid. These can vent, but only under abnormal conditions of overpressure. Sealed batteries of vehicle size have only recently become widely available. The few I'm aware of are several times more expensive than a typical maintenance free battery. Hams like to call these "gel cells" (which was a trade name of, as I recall, Globe). However, gelled electrolyte is very unusual these days -- virtually all the smaller batteries at least are of the "starved electrolyte" variety.

Thanks for the kind words. We all learn here.

Roy Lewallen, W7EL

2479. Re: 2M CW Xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 00:11:49 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <c3-dnRnT3NWvdRWjXTWcpg@ctc.net>
Source record: 36485

"> I am looking for info on building xtal controlled CW transmitters for 50,
> 144, 222, & 432 Mhz.
>
You may want to look into the older FM comeracial rigs. Just cut off the
audio. The only problem may be the 220 band. I think there have been some
conversions of the GE Mastr ll units to the 22o band for the exciters and
you need one of the ham band type amps to go from about 200 mw to the level
you want.

2480. Re: Automatic antenna tuning unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 00:21:18 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <b6am1v$1ss$1@julia.coi.pw.edu.pl>
Source record: 36482

Thanks a lot for some advice, hope it'll be helpful when designing the device.

With best wishes,
--
Paweł˝ Stobiż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

2481. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 00:42:02 UTC
From: Tracy Fort <beerbarrel@NOSPAMcox.net>
Message-ID: <l8oh8v068btndqbsmlk9sj0bvbj13mmneo@4ax.com>
Source record: 36483

Does this group have an associated binaries group...I thought I might
post some pics of the charger/powersupply...

Tracy

On Sat, 29 Mar 2003 23:17:15 GMT, Tracy Fort <beerbarrel@cox.net>
wrote:

>Here goes...
>
>Picked up a 12v power supply for my ham radio that has a 25 amp
>output...
>
>When I put the volt meter on the power supply I have an output of 13.8
>volts. I can adjust the pot inside and get it down to about 12.5
>volts...no problems
>
>but when I hook up the radio to the supply with the voltmeter still
>connected in parrallel to the radio the voltale goes up to over 19
>volts...is this normal operation or is something amiss..I don't want
>to destroy my radio...
>
>Any help?
>
>thanks,
>Tracy
>Tracy Fort
>
>KE4ODD
>
>beerbarrel@cox<NOSPAM>.net
>
>remove <NOSPAM> for repliess

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2482. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 01:08:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <jiph8vkkdef4vqt3fnf62naiombt2co4bi@4ax.com>
Source record: 36484

On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:

|Hi all,
|
|Anyone have pointers on where to buy small quantities of small
|semirigid coax at a reasonable price?
|
|Cheers,
|Tom

It's been a while since I used them but try Precision Tube.

2483. Re: WTB shaft adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 01:24:13 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3E88EA50.AA27803E@edge.net>
Source record: 36487

Paul and Linda Cooper wrote:

> WTB shaft adapters, both 1/4" and 3/8", all metal, with two set screws
> each side.
>
> Need 3/8" shaft inside to 1/4" solid shaft outside; Need 3/8" shaft
> inside to 3/8" shaft inside;
> Need 1/4" shaft inside to 1/4" shaft inside.
>
> The adapters will probably be no longer than 1.5" overall.
>
> Paul, K6PY

Try: www.hhsmith.com
and look under "shaft accessories". They have an inventory locator so you can see which of their distributors has the part in stock. I found some shaft extensions thru them.

Bob, K4QQK

2484. Re: Automatic antenna tuning unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 01:24:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303311724.40c89f73@posting.google.com>
Source record: 36486

Pawe? Stobi?ski <sq9nry@wp.pl> wrote in message news:<b6a0utpdi1@julia.coi.pw.edu.pl>...
> Good evening! (in Europe, of course)
>
> Recently I have caught an idea of building an automatic antena tuner. I have
> also some questions about this. The first is about the idea how it should
> work. Do I measure the amplitude at the output and set the capacitors and
> inductors to obtain maximum amplitude? In some design I have noticed there
> were two variable capacitors and a switched inductor. It makes three
> variable
> devices altogether, so what is the algorithm of setting them?

Since you are trying to match an unknown impedance to some standard impedance, you will want a way to detect when the match is good enough. One way to do that is just with an SWR bridge. Then you tune until the SWR is low enough. The problem with that is that you don't have much of an idea how to start, so some automatic tuners measure not only the reflected power, but the phase as well. You can get a clue by just noting which direction the SWR goes as you start tuning, but if the SWR is high, the change may be so small as you tune one of the components that other errors dominate and fool you. The phase plus SWR lets you know the full complex reflection coefficient, and from that, the impedance you must match.

If your goals do not include significant rejection of harmonics, then your algorithm should try to keep the loaded Q low. The reason for that is that a high loaded Q implies more power lost in the tuner, assuming that the capacitors and inductor(s) have reasonably constant Q independent of their settings. That's not strictly true, and you might do a little better with an algorithm that takes account of the component Qs versus settings, but it may not be worth the effort.

The algorithm should also know when to quit trying, in case it can't tune some particular load.

Cheers,
Tom

2485. Is this REALLY an sx28?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 01:36:39 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E88ED27.3050207@bellsouth.net>
Source record: 36488

Found this on ebay. If this is really a military version of the
Halicrafters SX28, it is some
repackage job. I've never seen on of these. Tacky dymo tape labels on
the panel. Not original at
any rate.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015496277&category=15051

2486. Re: Using an old radio's variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 01:44:36 UTC
From: Yap <meihoon@pl.jaring.my>
Message-ID: <b6aqu4$g2u$1@news6.jaring.my>
Source record: 36489

Tom,

the antenna itself is just a loop with a variable cap connected in
series.

here's where I found it --->

http://www.creative-science.org.uk/loopant.html

It seemed pretty simple to this layman so I decided to build it.
I'm hoping to get good reception on the 49 meter band.

However, seeing as how AM tops off at about 1 MHz and I want signals
of around 6 MHz, I worry that the AM capacitor may be too large.

- Chops

In article <3200347.0303311013.7658abaa@posting.google.com>,
k7itm@aol.com (Tom Bruhns) wrote:

> "Shortwave antenna tuning" is a pretty nebulous description of what
> you want to do. What sort of antenna? What sort of tuning--what do
> you want the tuner to do and why? What frequency range? Do you have
> a circuit configuration in mind? And I assume this is for receiving,
> or VERY low power transmitting.
>
> Tuning to me implies resonating. What inductance do you want to
> resonate? Inductance in the antenna's impedance, or in a coil in some
> sort of preselector? If it's the latter, you should be able to wind a
> coil (or coils) which will resonate with the capacitor you have. Then
> it's a problem of using that in a circuit which accomplishes the goal
> you have in mind. You should first find out what the capacitance
> range of each section is, though. I suppose there are probably four
> capacitor sections, and likely each has a different range.
>
> Cheers,
> Tom

2487. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 02:50:37 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <2g6dnUv1TKfmYxWjXTWcog@comcast.com>
Source record: 36490

Baynesville Electronics at Loch Raven and Joppa in Baltimore has a lot of stuff and is open Sunday.

I sometimes order from Ocean State electronics in Rhode Island. www.oselectronics.com. Not as fast as the others mentioned here, but they have some interesting NOS items.

Tom, N3IJ

"David Drumheller" <david@drumheller.org> wrote in message news:3e876b41_6@vienna7.his.com...
> I'd like to design and build some equipment, but don't know
> where to buy transistors, ICs and other small parts over-the-counter in
> Washington, DC or Baltimore, MD. Years ago, Radio Shack offered such item
> for
> sale, but the chain has now evolved into a consumer electroncs retail
store.
> The selection of parts was never spectacular, but at least you could find
> one of these store near your home.
>
> So where can I go these days? I'd like to browse through the parts myself,
> and I'm reluctant to mail order stuff I haven't seen and touched.
>
> -Dave, K3WQ
> david@drumheller.org
>
>
>

2488. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 02:58:19 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <b10i8vojfq2ictol95u219v8haq6291hck@4ax.com>
Source record: 36491

On Tue, 1 Apr 2003 00:30:31 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>
>"Gary Schafer" <gaschafer@attbi.com> wrote in message
>news:9aah8vk6t62149spubramfurfi05kk4e9d@4ax.com...
>> On Mon, 31 Mar 2003 10:23:55 +0100, "Richard"
>> <nearlynews_email@ntlworld.com> wrote:
>
>> >Now Collins/Rockwell make symmetrical filters. What are these
>> >for? And, are the sideband filters not symmetrical in their
>> >passband? TIA. Rich.
>>
>>
>> The stated center frequency of a filter is usually the actual
>center
>> of the filter unless they are stated as upper or lower side
>band
>> filters.
>
>
>Yes, so the Collins 455 Khz USB and LSB filters have different
>center frequencies. 455 Khz refers to carrier
>frequency.
>
>> The situation with Collins 455 khz filters is that is the
>center
>> frequency (455) khz. The carrier is set to one edge or the
>other for
>> upper or lower side band operation. That puts the side band
>energy in
>> the center of the filter.
>
>This is just for the symmetrical filter, ie, *not* stated as
>being a LSB or USB SSB filter. I guess this filter is for when
>you move the carrier into correct position, as contrasted with
>keeping the carrier at 455 Khz and swapping filters.

You have it right. However all the 455 khz Collins filters that I can
think of off hand are symmetrical filters and have the carrier offset
to one side or the other. I also can't think of any collins filters
that are not symmetrical no matter what they were made for.

Non symmetrical filters were usually crystal filters that were built
with a small number of crystals. With only 2 or 4 crystals in a filter

it is difficult to get good steep skirts on both sides of the filter. So they were often made with emphasis on one skirt for best side band suppression on that side. The other side would roll off less sharply. By using more crystals in the filter it is easier to get steep skirts on both sides of the filter.

A common filter arrangement that was used by collins was a 500 khz filter. These were usually upper or lower side band filters with the carrier at 500 khz.

Most 455 khz filters that you come across will have a center frequency of 455. These need the carrier set to one side or the other.

73
Gary K4FMX

2489. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 03:59:09 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E890E8D.952FDD83@eoni.com>
Source record: 36492

I love my AADE meter for the inductance function, but the capacitance function does not do so well. Checking with precision caps, mine had a 4-6% error, sometimes high sometimes low. My 2 other commercial LCR meters were under 1% on capacitance--but they were very poor on inductance (the main reason I got the AADE kit).
Steve

Uncle Peter wrote:
>
> That's a very nice and accurate meter for the price. It has a
> zeroing feature to eliminate lead or fixture capacitances
> from the readings.
>
> Peter
>
> "Jim Pennell" <NoSpam@killspam.com> wrote in message
> news:b60f6d$6jf$1@slb6.atl.mindspring.net...
> > You might want to check out this website... I hear the LCR meter works
> > nicely.
> >
> >
> > http://www.aade.com/lcmeter.htm
> >
> >
> > Jim Pennell
> > N6BIU
> >
> >

2490. Re: Antenna Tuning Unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 04:38:02 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E8917BB.84E3EEBE@bellatlantic.net>
Source record: 36493

Paweï¿½ Stobiï¿½ski wrote:
>
> Good evening! (in Europe, of course)
>
> Recently I have caught an idea of building an automatic antena tuner. I have
> also some questions about this. The first is about the idea how it should
> work. Do I measure the amplitude at the output and set the capacitors and
> inductors to obtain maximum amplitude?

I don't know if this is the best way to do it, but I use it
to adjust my tuner manually: use a phase detector circuit.
Voltage and current will be in phase when the transmitter sees
a purely resistive load. There's a good description of the
circuit at
http://www.tpub.com/neets/book12/51c.htm

Look for the write up on the Foster Seely discriminator.
Don't be misled by the fact that it is used as an FM demodulator -
it works fine for determining resonance.

> In some design I have noticed there
> were two variable capacitors and switched inductors. It makes three variable
> devices altogether, so what is the algorithm of setting them?

I'm not sure, but I think those depend on a signal or voltage
level from the transmitter that corresponds to a band. That signal/
voltage could be used to set the inductor, then the phase detector
output can be used to set the capacitors. In my case, I manually
set the inductor, then watch the phase detector null meters
as I turn the caps, looking for null on the meter. My
discriminator is a surplus unit (bought it for about $9.00 from
Fair Radio) that has outputs for 2 null meters.
>
> Thanks in advance!
> --
> Paweï¿½ Stobiï¿½ski, SQ9NRY
> Warsaw University of Technology
> Institute of Computer Science

2491. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 05:37:25 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <b6b8im$od1$1@slb9.atl.mindspring.net>
Source record: 36494

SB34.. Now THAT brings back memories.

I used to work at the factory, and we did indeed use a single 455 KHz mechanical filter with the mixing scheme as described to get upper/lower sideband.

Strong signal handling was not thought about very much in those days, it used germanium transistors in the IF amplifiers and a single diode as one of the mixing stages!!!

For it's time, with the bilateral amplifiers and so on it was a nice design but in terms of performance the entire concept is obsolete.

A CAREFULLY designed system can use a 455 KHz filter, usually at least a dual conversion of some sort, but a single conversion rig, with the crystal filter right after the first mixer will in most cases have better strong signal performance.

Jim Pennell
N6BIU

2492. Re: Using an old radio's variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 06:21:40 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Udaia.9026$cO3.542788@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36495

That cap probably resonates with a loopstick that may range in value from 200 to 400uH, depending on the value of the capacitor. I am not sure that your antenna has enough inductance to form a resonant circuit with that cap at 6MHz. I know that you were worried about not reaching up to that frequency range, but I think that the opposite may be true. You may need an additional series inductance in order to form a resonant circuit on the 49M band. A network analyzer (expensive), or an antenna analyzer, such as the unit that MFJ has available, should be able to show you what is going on, but I think that even that unit is right around the 200 dollar range. Don't give up on experimenting, though; that is where the real fun of the hobby is!

Pete

Yap <meihoon@pl.jaring.my> wrote in message
news:b6aqu4$g2u$1@news6.jaring.my...
> Tom,
>
> the antenna itself is just a loop with a variable cap connected in
> series.
>
> here's where I found it --->
>
> http://www.creative-science.org.uk/loopant.html
>
> It seemed pretty simple to this layman so I decided to build it.
> I'm hoping to get good reception on the 49 meter band.
>
> However, seeing as how AM tops off at about 1 MHz and I want signals
> of around 6 MHz, I worry that the AM capacitor may be too large.
>
> - Chops
>
> ----------
> In article <3200347.0303311013.7658abaa@posting.google.com>,
> k7itm@aol.com (Tom Bruhns) wrote:
>
> > "Shortwave antenna tuning" is a pretty nebulous description of what
> > you want to do. What sort of antenna? What sort of tuning--what do
> > you want the tuner to do and why? What frequency range? Do you have
> > a circuit configuration in mind? And I assume this is for receiving,
> > or VERY low power transmitting.
> >
> > Tuning to me implies resonating. What inductance do you want to
> > resonate? Inductance in the antenna's impedance, or in a coil in some

> > sort of preselector? If it's the latter, you should be able to wind a
> > coil (or coils) which will resonate with the capacitor you have. Then
> > it's a problem of using that in a circuit which accomplishes the goal
> > you have in mind. You should first find out what the capacitance
> > range of each section is, though. I suppose there are probably four
> > capacitor sections, and likely each has a different range.
> >
> > Cheers,
> > Tom

2493. Re: Using an old radio's variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 06:22:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303312222.617c78cb@posting.google.com>
Source record: 36496

OK, so you want to resonate the inductance of the antenna itself with
the capacitor. You just need to make the loop small enough that its
inductance will resonate with the capacitor you have... OR ... add a
fixed capacitor in series with the one you have. (Or perhaps in
parallel with one of the FM sections.) You won't have as wide a
tuning range, but the specific band you want to hear isn't all that
wide as a percentage of its center frequency anyway, if I'm not
mistaken. You can tell when things are resonant by the sharp peak in
the tuning. Reg Edwards has some programs that should let you make a
good estimate of the loop's inductance, I believe. You should be able
to find postings from Reg in this group, and in most/all, he gives his
web site URL.

Cheers,
Tom

"Yap" <meihoon@pl.jaring.my> wrote in message news:<b6aqu4$g2u$1@news6.jaring.my>...
> Tom,
>
> the antenna itself is just a loop with a variable cap connected in
> series.
>
> here's where I found it --->
>
> http://www.creative-science.org.uk/loopant.html
>
> It seemed pretty simple to this layman so I decided to build it.
> I'm hoping to get good reception on the 49 meter band.
>
> However, seeing as how AM tops off at about 1 MHz and I want signals
> of around 6 MHz, I worry that the AM capacitor may be too large.
>
> - Chops
>
> ----------
> In article <3200347.0303311013.7658abaa@posting.google.com>,
> k7itm@aol.com (Tom Bruhns) wrote:
>
> > "Shortwave antenna tuning" is a pretty nebulous description of what
> > you want to do. What sort of antenna? What sort of tuning--what do
> > you want the tuner to do and why? What frequency range? Do you have
> > a circuit configuration in mind? And I assume this is for receiving,
> > or VERY low power transmitting.
> >
> > Tuning to me implies resonating. What inductance do you want to

> > resonate? Inductance in the antenna's impedance, or in a coil in some
> > sort of preselector? If it's the latter, you should be able to wind a
> > coil (or coils) which will resonate with the capacitor you have. Then
> > it's a problem of using that in a circuit which accomplishes the goal
> > you have in mind. You should first find out what the capacitance
> > range of each section is, though. I suppose there are probably four
> > capacitor sections, and likely each has a different range.
> >
> > Cheers,
> > Tom

2494. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 06:26:21 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303312226.393b9884@posting.google.com>
Source record: 36397

Wes Stewart <n7ws@#arrl.net> wrote in message
news:<jiph8vkkdef4vqt3fnf62naiombt2co4bi@4ax.com>...
> On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:
>
> |Hi all,
> |
> |Anyone have pointers on where to buy small quantities of small
> |semirigid coax at a reasonable price?
> |
> |Cheers,
> |Tom
>
>
> It's been a while since I used them but try Precision Tube.

Thanks, Wes. I know they make good stuff, but I've heard they have a
$500 minimum. Maybe I should contact them to check. Their web site
does list three distributors as well.

Cheers,
Tom

2495. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 07:03:24 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6bdg5$3he4d$1@ID-150848.news.dfncis.de>
Source record: 36398

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:b10i8vojfq2ictol95u219v8haq6291hck@4ax.com...
> On Tue, 1 Apr 2003 00:30:31 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:

> You have it right. However all the 455 khz Collins filters that
I can
> think of off hand are symmetrical filters and have the carrier
offset
> to one side or the other. I also can't think of any collins
filters
> that are not symmetrical no matter what they were made for.

The 455 Khz symmetrical filter offerings have a symmetrical passband I guess. But why call them symmetrical filters. First thought is that the USB and LSB filters are assymetrical, so it's differentiating re passband shape, but you say the USB and LSB filters are symmetrical.

Not really important, but just unsure why call the 455 Khz filters, which are meant to be used where you alter the carrier position, a symmetrical filter. Maybe it's just the best term the Collins came up with to differentiate these filter from the LSB and USB filters, where the carrier stays put on 455.

2496. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 07:07:16 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <v8l313skf35r98@corp.supernews.com>
Source record: 36436

> ... You will find that the mixer
> works best if filter element nearest the mixer is a series
> inductor, rather than the more common shunt capacitor.
> A little known fact.

An explanation, please?

73, John - K6QQ

2497. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 08:53:50 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <bikh8vsi781rl0to5kldimmrq7uaddd684@4ax.com>
Source record: 36399
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Mon, 31 Mar 2003 18:41:48 GMT, Jasper Janssen <jasper@jjanssen.org>
wrote:

>On Tue, 28 Jan 2003 21:33:55 -0500, Technician <travis57@megalink.net>
>wrote:
>
>>Slightly off on a tangent here, but has anybody else noticed that in
>>Win98, if you create a new shortcut (Richt-click --> New --> Shortcut),
>>that the picture to the left shows the Win95 start menu?
>>

It doesn't in mine in 98 or SE as well.

>>And its still there in second edition. Don't tell me that windows is not
>>programed in the copy & paste method.

>
>It's not, or at least this isn't evidence of it. It's programmed in the
>"alter only the bits that need altering" method.
>
>Now if you found win3.11 in 9x, or 9x in NT, that'd be evidence of c/p
>programming.
>
>Jasper

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

2498. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 09:26:07 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <apmi8v07enlnbuhmmvnivk9n14oafdusqg@4ax.com>
Source record: 36400

On Tue, 01 Apr 2003 00:42:02 GMT, Tracy Fort <beerbarrel@NOSPAMcox.net> wrote:

>Does this group have an associated binaries group...I thought I might
>post some pics of the charger/powersupply...
>
>Tracy
>

Not that I am aware of, but you should be able to use
alt.binaries.schematics.electronic. This is used sometimes by
sci.electronics.design and should be acceptable since some people watch both
groups. The other (possibly better) choice is to post on some web page you have
access to and post a link in messages to the group.

In your case, I think working out the circuit of the charger and posting a
schematic would be better than pictures of the device. I have a technique that I
use to "reverse engineer" simple circuit boards where I start by scanning the
bottom of the board with my flatbed scanner. I can post a more complete
description of my methods if there is any interest.

-Rex

2499. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 11:07:57 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <tNEh8yCNMXi+EAV1@ifwtech.co.uk>
Source record: 36401

Rex wrote:
> I have a technique that I
>use to "reverse engineer" simple circuit boards where I start by scanning the
>bottom of the board with my flatbed scanner. I can post a more complete
>description of my methods if there is any interest.

Yes, please! We all hate having to do repairs and modifications without
a schematic. Anything to make that easier is well worth sharing.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2500. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 11:12:26 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <p9BggTDaQXi+EAW6@ifwtech.co.uk>
Source record: 36402

Tom Bruhns wrote:
>Wes Stewart <n7ws@#arrl.net> wrote in message
>news:<jiph8vkkdef4vqt3fnf62naiombt2co4bi@4ax.com>...
>> On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:
>>
>> |Hi all,
>> |
>> |Anyone have pointers on where to buy small quantities of small
>> |semirigid coax at a reasonable price?
>> |
>> |Cheers,
>> |Tom
>>
>>
>> It's been a while since I used them but try Precision Tube.
>
>Thanks, Wes. I know they make good stuff, but I've heard they have a
>$500 minimum. Maybe I should contact them to check. Their web site
>does list three distributors as well.

Is there any problem with buying surplus jumpers, or salvaging them from
junk?

They can usually be straightened and bent again before the copper jacket
cracks, and they have the big advantage of having a connector
ready-installed on each end.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2501. Re: Antenna Tuning Unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 15:07:12 UTC
From: jgboyles@aol.com
Message-ID: <20030401100712.16172.00000256@mb-ca.aol.com>
Source record: 36403

>use a phase detector circuit.
>Voltage and current will be in phase when the transmitter sees
>a purely resistive load. There's a good description of the
>circuit at
>http://www.tpub.com/neets/book12/51c.htm

That was a good description of the Foster Seely discriminator. Do you use the circuit exactly as shown in the article as a phase detector when adjusting your tuner? That circuit has only one input and output. As I understand the circuit, you get an output when the input frequency differs from the center frequency of the discriminator. It will demodulate FM at the frequency it is tuned.
For this circuit to work as a phase detector wouldn't you have to split the input into 2 sections and apply the 2 signals you wish to compare phases. Then the output would be zero at resonance, one polarity with the current leading, the opposite polarity current lagging. Or am I all wet?
73 Gary N4AST

2502. Re: Is this REALLY an sx28?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 15:09:31 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E89AB9A.D8FD56E6@att.net>
Source record: 36404

Looks like some sort of special contract, special purpose repackage of the SX28 made
by RCA, not Hallicrafters, likely for aircraft use. Strange. Probably rare, at least very unusual.
Probably a similiar situation to the later Collins military airborne repackage of the 51S1 by LTV.

scharkalvin wrote:

> Found this on ebay. If this is really a military version of the
> Halicrafters SX28, it is some
> repackage job. I've never seen on of these. Tacky dymo tape labels on
> the panel. Not original at
> any rate.
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015496277&category=15051

2503. cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 15:09:59 UTC
From: bertsch.3@osu.edu
Message-ID: <b6ca47$30f$1@layla.net.ohio-state.edu>
Source record: 36405

I'm thinking of using some ordinary DPDT toggle switches (the kind that mount in a 7/16" hole) to build a custom antenna/coax switch. It would only need to work at HF up to 100 watts max. My tests show these switches have a capacitance of 3-6pF between contacts, and between the contacts and the switch body. The breakdown voltage between contacts, and between the contacts and the switch body is about 2KV at 60Hz.

I can't think of any reason these switches wouldn't work. Any ideas?

Thanks,
Steve

2504. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 15:24:49 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E89AF31.294B0157@att.net>
Source record: 36406

Tracy Fort wrote:

>Something is evidently wrong with the board.

Ah, a clue! That's probably why it isn't still in the RV it was originally installed in.

2505. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 15:30:59 UTC
From: jgboyles@aol.com
Message-ID: <20030401103059.16172.00000258@mb-ca.aol.com>
Source record: 36407

>I'm thinking of using some ordinary DPDT toggle switches (the kind
>that mount in a 7/16" hole) to build a custom antenna/coax switch.

>I can't think of any reason these switches wouldn't work. Any ideas?

I use the minature kind 1/4" hole in a changeover switch in my 100 watt mobile rig. I use it to switch the mobile antenna from the rig to an antenna analyzer. The unselected input is shorted to ground. Works fine for me.
The voltage and current capability of your toggle switches are fine for 100 watts. You will have a little more loss using toggle switches as opposed to a carefully designed coaxial switch, but at HF you won't notice.
I haven't done any a/b comparisons between toggles and other type switches at hf, but the toggles will work.
73 Gary N4AST

2506. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 17:12:43 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87d6k6nnuc.fld@barrow.com>
Source record: 36408

Dick Carroll <dickc58@att.net> wrote:
>Tracy Fort wrote:
>
>>Something is evidently wrong with the board.
>
>
>
> Ah, a clue! That's probably why it isn't still in the RV it was originally
>installed in.

That may be true, but you've misunderstood what Tracy said.
Here's the entire quote:

"The converter had 5 outputs, one of which goes
through a circuit board and is supposed to be a
filtered output for a radio. That was why I though it
might work. Something is evidently wrong with the
board."

The "board", being the one "supposed to be a filtered output for
a radio"; however, Tracy figured that "filtered" meant the DC
would be stable and ripple free. That's is *not* what such a
filter would be for. It's a transient/noise filter designed to
keep voltage spikes and RF out of the attached radio.

The filtering Tracy was expecting would be provided by the
battery. The board doesn't have something wrong, it just
doesn't have a battery attached.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2507. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 17:36:39 UTC
From: Tracy Fort <beerbarrel@NOSPAMcox.net>
Message-ID: <i7jj8vgd66987rubmqi9vmqn54gajsql95@4ax.com>
Source record: 36409

There ya have it! I think that is exactly right. Thanks Floyd.. I
think now it boils down to either using a battery with this supply of
scrapping the supply and using the transformer, case , and
rectifier....

I know quite a few people said to buy a supply that they are cheap
enough, but I would really like to learn how they operate by building
one myself. I never did expect this much feedback about something like
a PS, but it is really appreciated.

Tracy

On 01 Apr 2003 08:12:43 -0900, Floyd Davidson <floyd@ptialaska.net>
wrote:

>Dick Carroll <dickc58@att.net> wrote:
>>Tracy Fort wrote:
>>
>>>Something is evidently wrong with the board.
>>
>>
>>
>> Ah, a clue! That's probably why it isn't still in the RV it was originally
>>installed in.
>
>That may be true, but you've misunderstood what Tracy said.
>Here's the entire quote:
>
> "The converter had 5 outputs, one of which goes
> through a circuit board and is supposed to be a
> filtered output for a radio. That was why I though it
> might work. Something is evidently wrong with the
> board."
>
>The "board", being the one "supposed to be a filtered output for
>a radio"; however, Tracy figured that "filtered" meant the DC
>would be stable and ripple free. That's is *not* what such a
>filter would be for. It's a transient/noise filter designed to
>keep voltage spikes and RF out of the attached radio.
>
>The filtering Tracy was expecting would be provided by the
>battery. The board doesn't have something wrong, it just
>doesn't have a battery attached.

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2508. Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 18:44:48 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0304011044.17660ca1@posting.google.com>
Source record: 36410

Ive built a 20 meter VXO an am using it to drive a sbl-1 LO to produce DSB. The VXO output waveform is not the best, in spite of all my efforts. The question is, how important is LO purity into these diode modulators. Should I lowpass filter the VXO output before feeding the sbl-1. Does it matter since the diodes switch on and off anyway?

Gary

W4AF

2509. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 19:43:44 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E89EC0A.E767AB9@bellatlantic.net>
Source record: 36411

Vic wrote:

>
> Would it be OK to have a 8' ground rod outside, coupled to the shack ground, even though it is NOT coupled to the house electrical
> ground?

No it would not. It violates the National Electrical Code; can
introduce objectionable ground currents, and, though improbable,
could possibly kill you.

Is 8' enough ... I can get a 10-12' rod if necessary? Is copper clad
iron OK or should it be pure copper rod?
>
> Is it OK to couple the common ground in the shack to the house wiring AC ground?

Not just "OK" - it's mandatory for your safety.

2510. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 19:46:49 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <xdmia.811$VU3.518@newsfep1-gui.server.ntli.net>
Source record: 36412

I'd second that, it sounds like it would beat my "follow each track with a pen" method!

--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:tNEh8yCNMXi+EAV1@ifwtech.co.uk...
> Rex wrote:
> > I have a technique that I
> >use to "reverse engineer" simple circuit boards where I start by scanning the
> >bottom of the board with my flatbed scanner. I can post a more complete
> >description of my methods if there is any interest.
>
> Yes, please! We all hate having to do repairs and modifications without
> a schematic. Anything to make that easier is well worth sharing.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

2511. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 20:13:36 UTC
From: mcalhoun@ksu.edu
Message-ID: <b6crtg$l5h@unix1.cc.ksu.edu>
Source record: 36413

<>...I thought about putting [a battery] across the terminals to see the
<>results but have not as of yet. I need to put the supply in the house
<>and was kind of leary about putting the battery in the house. Plus, the
<>wife would shoot me.
<Besides any harm caused by your wife shooting you, a lead-acid battery
<gives off fumes from (and could spill) sulfuric acid, which could
<damage many things in your house, including occupants. I wouldn't have
<it any more inside than a garage or shed.

My hamshack has been powered by a lead-acid battery for over 20 years,
the shack is in my finished basement, I've NEVER smelled any sulfuric-acid
fumes nor seen any evidence of sulfuric-acid-fume damage, my house has NOT
exploded, and my wife has NOT shot me, either.

Furthermore, a good battery does wonders for ones peace of mind during
wind- and ice-storms, etc., when the main's power goes off but all the
radios (AM/FM/Scanner/2-meter/HF, etc.) continue to work.

Of course, I don't boil the battery when charging it, either!

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2512. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 20:16:58 UTC
From: mcalhoun@ksu.edu
Message-ID: <b6cs3q$lb9@unix1.cc.ksu.edu>
Source record: 36414

>I'm thinking of using some ordinary DPDT toggle switches (the kind
>that mount in a 7/16" hole) to build a custom antenna/coax switch.
>It would only need to work at HF up to 100 watts max. My tests show
>....[snip]....

I've used such switches in my homebrew antenna tuners and can recall
having only ONE fail in maybe 20 years.

I once saw, at a recently-deceased sale of an old ham's stuff at a
hamfest, an AT which used house-wiring-type switches; it was a thing
of beauty and opened my eyes to lots of hamebrew possibilities!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2513. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 20:38:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8ju5lr2p3hi63@corp.supernews.com>
Source record: 36415

I've used small power relays for antenna and directional array switching for many years. The only problem I've had, and that you might have when using power switches or relays, is that you might have to transmit once in a while. Power switches, being designed for switching substantial voltage and current, typically have silver contacts. These oxidize or form other surface salts like silver sulfide. In normal operation, the power is adequate to burn through the layer, the arc cleaning the contacts each time the switch is thrown. If the switch or relay goes a long period without transmitter power being applied (that is, being idle or just being used for receiving), the contact gets erratic. A "dit" or two from the transmitter is usually enough to clean them. I've also found that WD-40 will extend the period they can go without transmitting. The contact pressure is adequate to make contact through the WD-40, but it inhibits surface corrosion.

The bottom line is that power relays and switches aren't a good choice for receive-only applications, but they're fine if you also transmit through them at least once in a while.

Roy Lewallen, W7EL

mcalhoun wrote:
>>I'm thinking of using some ordinary DPDT toggle switches (the kind
>>that mount in a 7/16" hole) to build a custom antenna/coax switch.
>>It would only need to work at HF up to 100 watts max. My tests show
>>....[snip]....
>
>
> I've used such switches in my homebrew antenna tuners and can recall
> having only ONE fail in maybe 20 years.
>
> I once saw, at a recently-deceased sale of an old ham's stuff at a
> hamfest, an AT which used house-wiring-type switches; it was a thing
> of beauty and opened my eyes to lots of hamebrew possibilities!
>
> --Myron.

2514. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 20:51:58 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304011251.7a236f6b@posting.google.com>
Source record: 36416

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<p9BggTDaQXi+EAW6@ifwtech.co.uk>...
> Tom Bruhns wrote:
> >Wes Stewart <n7ws@#arrl.net> wrote in message
> >news:<jiph8vkkdef4vqt3fnf62naiombt2co4bi@4ax.com>...
> >> On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:
> >>
> >> |Hi all,
> >> |
> >> |Anyone have pointers on where to buy small quantities of small
> >> |semirigid coax at a reasonable price?
> >> |
> >> |Cheers,
> >> |Tom
> >>
> >>
> >> It's been a while since I used them but try Precision Tube.
> >
> >Thanks, Wes. I know they make good stuff, but I've heard they have a
> >$500 minimum. Maybe I should contact them to check. Their web site
> >does list three distributors as well.
>
> Is there any problem with buying surplus jumpers, or salvaging them from
> junk?
>
> They can usually be straightened and bent again before the copper jacket
> cracks, and they have the big advantage of having a connector
> ready-installed on each end.

Jumpers would probably do fine...not quite sure where to find an
inexpensive source of them.

Turns out my immediate need has been resolved locally, but I sure
appreciate the inputs I've gotten here and via email. Thanks,
everyone!

I did find out that Down East Microwave sells several different sizes
by the foot.

I also found out from Precision Tube that their Coaxitube division is
no longer part of the organization...I discovered that by asking for a
catalog. The email they sent back said, "I am sorry, but Coaxitube is
no longer a company owned by our parent company, Mueller Industries.
I do not have any further information for you in regard to this." I
gather this is recent, since their website still has Coaxitube info

and a place on it to order the catalog! Maybe they will surface somewhere else. But of course, other companies manufacture semirigid, and in any event I'll probably be wanting to deal with a distributor and not a factory.

Cheers,
Tom

2515. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 20:55:06 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E89FCAA.3040707@wanadoo.fr>
Source record: 36417

hello
a DBM must have a perfect purity output , ratio 50/50 square or sinusoidal
the output filter is for avoid harmonics and not avoiding spurius due to
bad ratio
excuse for approximative english or US language
Serge

2516. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 21:04:47 UTC
From: Ake <SM2FNI.non@telia.com>
Message-ID: <P9nia.3558$Du.11488@newsc.telia.net>
Source record: 36418

"Tom Bruhns" <k7itm@aol.com> skrev i meddelandet
news:3200347.0304011251.7a236f6b@posting.google.com...
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<p9BggTDaQXi+EAW6@ifwtech.co.uk>...
> > Tom Bruhns wrote:
> > >Wes Stewart <n7ws@#arrl.net> wrote in message
> > >news:<jiph8vkkdef4vqt3fnf62naiombt2co4bi@4ax.com>...
> > >> On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:
> > >>
> > >> |Hi all,
> > >> |
> > >> |Anyone have pointers on where to buy small quantities of small
> > >> |semirigid coax at a reasonable price?
> > >> |
> > >> |Cheers,
> > >> |Tom
> > >>
> > >>
> > >> It's been a while since I used them but try Precision Tube.
> > >
> > >Thanks, Wes. I know they make good stuff, but I've heard they have a
> > >$500 minimum. Maybe I should contact them to check. Their web site
> > >does list three distributors as well.
> >
> > Is there any problem with buying surplus jumpers, or salvaging them from
> > junk?
> >
> > They can usually be straightened and bent again before the copper jacket
> > cracks, and they have the big advantage of having a connector
> > ready-installed on each end.
>
> Jumpers would probably do fine...not quite sure where to find an
> inexpensive source of them.
>
> Turns out my immediate need has been resolved locally, but I sure
> appreciate the inputs I've gotten here and via email. Thanks,
> everyone!
>
> I did find out that Down East Microwave sells several different sizes
> by the foot.
>
> I also found out from Precision Tube that their Coaxitube division is
> no longer part of the organization...I discovered that by asking for a
> catalog. The email they sent back said, "I am sorry, but Coaxitube is

> no longer a company owned by our parent company, Mueller Industries.
> I do not have any further information for you in regard to this." I
> gather this is recent, since their website still has Coaxitube info
> and a place on it to order the catalog! Maybe they will surface
> somewhere else. But of course, other companies manufacture semirigid,
> and in any event I'll probably be wanting to deal with a distributor
> and not a factory.
>
> Cheers,
> Tom

Look at: http://www.xs4all.nl/~barendh/Indexeng.htm

/Ake

2517. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 21:11:11 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <i90k8vsk4hub3nhdusfm90ndqjubpd338q@4ax.com>
Source record: 36419

Myron,
How does it feel to be married to a nice woman? :-)

Tracy

On 1 Apr 2003 14:13:36 -0600, mcalhoun@ksu.edu (mcalhoun) wrote:

><>...I thought about putting [a battery] across the terminals to see the
><>results but have not as of yet. I need to put the supply in the house
><>and was kind of leary about putting the battery in the house. Plus, the
><>wife would shoot me.
><Besides any harm caused by your wife shooting you, a lead-acid battery
><gives off fumes from (and could spill) sulfuric acid, which could
><damage many things in your house, including occupants. I wouldn't have
><it any more inside than a garage or shed.
>
>My hamshack has been powered by a lead-acid battery for over 20 years,
>the shack is in my finished basement, I've NEVER smelled any sulfuric-acid
>fumes nor seen any evidence of sulfuric-acid-fume damage, my house has NOT
>exploded, and my wife has NOT shot me, either.
>
>Furthermore, a good battery does wonders for ones peace of mind during
>wind- and ice-storms, etc., when the main's power goes off but all the
>radios (AM/FM/Scanner/2-meter/HF, etc.) continue to work.
>
>Of course, I don't boil the battery when charging it, either!
>
>--Myron, W0PBV.

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2518. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 21:32:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8k1b6k6n022a4@corp.supernews.com>
Source record: 36420

Switches designed for "dry circuit" operation are typically gold plated. I recall the period when gold prices escalated dramatically and manufacturers scrambled to find substitutes. Of the many substitutes tried, virtually all failed in the field sooner or later. So I remain very skeptical of anything but gold for reliable dry circuit operation. Virtually all properly designed contacts have mechanical wiping action, but often all it does with an oxidized (used loosely here to cover all kinds of surface salts, e.g., oxides, chlorides, sulfides) surface is to break and embed the surface layer into the underlying metal. Eventually, there's nothing but broken oxide pieces anywhere near the surface, and the contact fails permanently. This is particularly bad with something like tin, where the oxide is very hard and the metal very soft. Power switching actually vaporizes the surface layer with the arc, leaving it clean. The only way to avoid the problem without the cleaning arc is to make the contacts from a material that doesn't oxidize in the first place.

Some switches can be used for either power or dry circuit switching. These typically have gold plating over silver. However, if power is ever switched, even once, the gold plating is burned off and the switch can only be used reliably for power switching afterward.

Fortunately, we can be pretty casual about this for most amateur applications -- if a switch fails, we can just replace it. But making a product expected to work reliably without maintenance for many years requires a lot of attention to this kind of detail -- which, as you might have guessed, is how I came across it.

Roy Lewallen, W7EL

Bill Turner wrote:
> On Tue, 01 Apr 2003 12:38:15 -0800, Roy Lewallen <w7el@eznec.com> wrote:
>
>
>>The bottom line is that power relays and switches aren't a good choice
>>for receive-only applications, but they're fine if you also transmit
>>through them at least once in a while.
>
>
> ____
>
> Look for relays which have a wiping action as they make contact. That
> is, the contact point touches and then moves sideways a small amount due
> to the bending of the arm. This type should keep itself clean much
> longer without the need to transmit through it. The best contact
> materials are silver, rhodium, platinum, palladium and gold, because

> they either don't oxidize or the oxides themselves are conductors.
> Gold, being soft, is generally used with very little wiping action.
>
> The same thing applies to switches although in most cases you can't see
> the actual contact point. Some switches are advertised as having
> wiping-type contacts and those are the ones to get.
>
> Bill, W7TI

2519. Re: Wanted: Weller Soldering Iron

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 21:44:39 UTC
From: Ian Pollard <easthorton@emmessennn.com>
Message-ID: <u02k8vobc1t7feo67e4rce9f57ugc1gt2g@4ax.com>
Source record: 36421

On Mon, 31 Mar 2003 00:32:00 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>Where can i purchase a new soldering iron for
>the matching weller wtcps power unit?
>
Try http://www.crawfordtool.com/weller.html if you are in the USA

Ian

--
Ian Pollard//Wooler//Northumberland//UK
E-Mail address is munged to cut out spam
please use easthorton@msn.com

2520. Re: shack grounding questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 21:45:30 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <fj1k8v0ir5l0c1t71s5fdjnmvtpkmedp8d@4ax.com>
Source record: 36422

On Tue, 01 Apr 2003 19:43:44 GMT, ehsjr@bellatlantic.net wrote:

>Vic wrote:
>
>> Would it be OK to have a 8' ground rod outside, coupled to the shack ground, even though it is NOT coupled to the house electrical
>> ground?
>
>No it would not. It violates the National Electrical Code; can
>introduce objectionable ground currents, and, though improbable,
>could possibly kill you.
>
> Is 8' enough ... I can get a 10-12' rod if necessary? Is copper clad
>iron OK or should it be pure copper rod?
>>
>> Is it OK to couple the common ground in the shack to the house wiring AC ground?
>
>Not just "OK" - it's mandatory for your safety.

A single ground point for everything has a number of advantages,
including safety. Ground loops caused by multiple grounding points are
very annoying to troubleshoot.

When we had the 40 year old fuse box at the electrical entry at my
mother's house replaced with a new breaker box, the electrician ran a
large wire (8 g I think) from the garage over to the part of the
basement where the water supply comes in the house, and tied the
entire house ground to that. This is an example of current (no pun
intended) NEC practice. Even if you do the electrical work yourself,
you need to follow code.

Assuming the water piping is metal, this works well, and can save you
a good bit of trouble.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2521. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 23:24:54 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E8A1FC6.84804CA0@osite.com.br>
Source record: 36423

Roy Lewallen wrote:
>
> I've used small power relays for antenna and directional array switching
> for many years. The only problem I've had, and that you might have when

This thread has eased me a bit...Specially when someone like
you, Roy, tell this kind of assuring thing.

I was looking for suitable relays to homebrew a remote
antenna switch...I saw John's (EI7BA) homepage and he says
only good things about his remote switch. But I was somewhat
afraid of building the thing...People advised me: "get some
RF relays", but the price is high, and I'm on a budget...

I think I can go the power relay way...
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2522. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-01 23:52:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3e8a153c.113483518@news.online.no>
Source record: 36424

On Mon, 31 Mar 2003 19:59:09 -0800, Steve Ratzlaff
<steveratz@eoni.com> wrote:

>I love my AADE meter for the inductance function, but the capacitance
>function does not do so well. Checking with precision caps, mine had a
>4-6% error, sometimes high sometimes low. My 2 other commercial LCR
>meters were under 1% on capacitance--but they were very poor on
>inductance (the main reason I got the AADE kit).
>Steve
>

and what sort of figure would it be for relative successive
measurements? It is what counts when you need to select equal as
possible devices, but the absolute value is less important

73
Jan-Martin
LA8AK
Technical topics http://home.online.no/~la8ak/

--
remove ,xnd to reply

2523. Thanks for the info, guys :^)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 01:10:51 UTC
From: Yap <meihoon@pl.jaring.my>
Message-ID: <b6ddap$7v3$1@news5.jaring.my>
Source record: 36425

Guess I'll do some experimenting.

2524. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 01:25:02 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3E8A3BEE.E10F2934@cox.net>
Source record: 36426

The distortion you are referring to is a symptom of a problem with the oscillator, and probably means the signal has excessive sideband noise that will affect its operation more significantly than its harmonic content.

The output of an oscillator grows until it hits a maximum limit. Most simple bipolar oscillators limit out by hitting a voltage saturation point. From what I read, this mechanism causes undue sideband noise due to a temporary drastic reduction in Q as it hits this voltage saturation condition.

For bipolar oscillators, current limiting operation is much more desirable, as it maintains the Q of the resonator. Oscillators with this behavior take some design expertise to make sure it works right and tend not to be the simple, straight forward, single transistor designs that are most often seen.

Simple FETs oscillators tend to work much better than bipolar because of a diode that is often used at the gate. This diode allows a charge to build up on the gate capacitor as the oscillation increases, reducing the gain of the FET until the ideal loop gain of one is achieved. The use of the diode hurts the sideband noise a little bit, but the resulting "gain limited" oscillator signal tends to be much cleaner than than the output of the correspondingly simple bipolar oscillator.

Bipolars can do very well, but usually require more design expertise to make sure it is operating under the correct conditions for optimum results.

The ARRL book "Radio Frequency Design" spends a lot of time on the ins and outs of various flavors of oscillators, including VXOs and is very recommended reading. You do not need to understand everything that is written there to take away some very useful information.

Beyond the sideband noise issue, any mixer will generate a lot of harmonics on its own as part of the switching/mixing process, so the harmonic content is not as much of an issue as sideband noise. If nothing else, a low pass filter can be used to clean a harmonic problem up especially if the signal has a symmetry problems.

- Dan, N7VE

gary wrote:
>
> Ive built a 20 meter VXO an am using it to drive a sbl-1 LO to produce
> DSB. The VXO output waveform is not the best, in spite of all my
> efforts. The question is, how important is LO purity into these diode

> modulators. Should I lowpass filter the VXO output before feeding the
> sbl-1. Does it matter since the diodes switch on and off anyway?
>
> Gary
>
> W4AF

2525. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 01:53:29 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <ekgk8vo106lfn0qg4e9dmgm2k7ku0sq0dv@4ax.com>
Source record: 36427

On Tue, 1 Apr 2003 08:03:24 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>
>"Gary Schafer" <gaschafer@attbi.com> wrote in message
>news:b10i8vojfq2ictol95u219v8haq6291hck@4ax.com...
>> On Tue, 1 Apr 2003 00:30:31 +0100, "Richard"
>> <nearlynews_email@ntlworld.com> wrote:
>
>> You have it right. However all the 455 khz Collins filters that
>I can
>> think of off hand are symmetrical filters and have the carrier
>offset
>> to one side or the other. I also can't think of any collins
>filters
>> that are not symmetrical no matter what they were made for.
>
>
>The 455 Khz symmetrical filter offerings have a symmetrical
>passband I guess. But why call them symmetrical filters. First
>thought is that the USB and LSB filters are assymetrical, so it's
>differentiating re passband shape, but you say the USB and LSB
>filters are symmetrical.
>
>Not really important, but just unsure why call the 455 Khz
>filters, which are meant to be used where you alter the carrier
>position, a symmetrical filter. Maybe it's just the best term
>the Collins came up with to differentiate these filter from the
>LSB and USB filters, where the carrier stays put on 455.

Hi Richard,

Usually when referring to a filter being symmetrical, you are
referring to the slope of the filter skirts. A symmetrical filter
would have both skirt slopes the same. A non symmetrical filter would
have one skirt slope steeper than the other.

73
Gary K4FMX

2526. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 01:59:41 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e8a4155.6286962@news.cantech.net.au>
Source record: 36429

On Tue, 01 Apr 2003 12:38:15 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>I've used small power relays for antenna and directional array switching
>for many years. The only problem I've had, and that you might have when
>using power switches or relays, is that you might have to transmit once
>in a while.

(snip)

As an interesting aside (to some, maybe), I was maintenance engineer
for a remote HF Rx site for the state govt. On that site we had about
forty separate single channel receivers, with the output audio signals
despatched via digital microwave bearer. After about two years of
stable operation with routine maintenance, we found reception
deteriorating fairly much across the board. We exhaustively tested
multicouplers, antenna systems and pretty much everything we could
find that was common to all receivers, but no joy.

Then we went to do a test through a receiver and disconnected the
mux-Rx cable at the Rx. (All prior testing had removed cables at the
mux end). Rx tested fine. Reinstated cable and proper Rx performance
returned. We then proceeded to remove and reinsert the RF connectors
on each Rx in turn until we had them all percolating nicely.

These receivers used SO239 for their antenna port. The connection
between the cable inner pin and the socket had gone high resistance
due to the total lack of any wiping current (not dissimilar metal
action). This was not an effect we had previously experienced in RF
connectors. The current maintenance schedule calls for these
connectors to all be removed and reinserted several times every six
months, and problems have not returned.

Peter VK6ZEG

2527. FA: ebay ham stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 02:01:05 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <Bvria.9937$cO3.621883@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36428

ON EBAY NOW UNDER 'SELLER' heytubeguy

two 150 pf air variables
32 Amp fil choke
hvy duty rf switch
WE xfmrs
large coil buss bar
30 watt 25k power resistors
30 watt mod xfmr
small copper var. inductor
10 811A's NOS
National HFS res.conv with all the coils
Jennings spdt vac relay RJ1-A
manuals
large and small coil sets
1930's QST's

73 heytubeguy

2528. Re: Another dumb question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 02:22:53 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <qbik8vo2lhjk8ijquqok98h1au8cm16ndk@4ax.com>
Source record: 36430

On Tue, 1 Apr 2003 12:07:57 +0100, "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
wrote:

>Rex wrote:
>> I have a technique that I
>>use to "reverse engineer" simple circuit boards where I start by scanning the
>>bottom of the board with my flatbed scanner. I can post a more complete
>>description of my methods if there is any interest.
>
>Yes, please! We all hate having to do repairs and modifications without
>a schematic. Anything to make that easier is well worth sharing.

I'm not sure how useful this will be, because I use software that most people will not have. The main thing required is some photo editing software. I use PhotoImpact by Ulead which is similar to Photoshop but cheaper. There are probably many other similar software packages that could be used.

This is mainly for one-sided boards. Two sided is more difficult.

I put the board on a flatbed scanner and scan in color the circuit traces. Sometimes I use a digital camera to photograph the circuit trace side. Either will work.

I import the picture into my editing software. Using drawing tools I select a bright color different from the board color, like red. With the brush drawing tool set to freehand, I adjust the drawing size to about the dimensions of a pad on the circuit image. I place circles over each of the pads (transparancy is set to zero and soft edge is also set to zero to give sharp edges on the new circles and lines I am adding to the drawing.)

I set the pen to straight lines, reduce the size to smaller than the trace width, and draw connected lines over all the circuit traces. I also draw lines around the board edges and any other cutouts, holes, or features I want for recognizing locations. At the end of this I have all the circuit traces and features painted as bright red.

I use the magic wand select tool to select all of the red ciruits by color. (This takes only one tap on a portion of the circuit.) I now copy this selected circuit object into a new blank white image file the same size or larger. If someone has Photoshop, this process could probably be simplified by using its layer features to put the new circuit drawin in its own layer.

I now have a new image file which is the circuit traces only. I convert this to greyscale. I save this file. I flip that image horizontally to convert it so it matches the view from the component side of the board.

I print this out. This printout should be as large as possible. I examine the original board and, with a pencil, I draw schematic symbols for the circuit components onto the printout. When I have all the components and jumpers, etc. I can use this diagram to start working out the schematic in a logical way. Sometimes I use colored pencils to differentiate between types of components.

That's about it. You have to have some kind of photo editing software and be familiar with it, but after that its not hard to do this. Hope it helps some of you.

-Rex

2529. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 03:38:44 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3E8A5B44.60D49411@sympatico.ca>
Source record: 36432

Gary Schafer wrote:
>
> On Tue, 1 Apr 2003 00:30:31 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> >
> >"Gary Schafer" <gaschafer@attbi.com> wrote in message
> >news:9aah8vk6t62149spubramfurfi05kk4e9d@4ax.com...
> >> On Mon, 31 Mar 2003 10:23:55 +0100, "Richard"
> >> <nearlynews_email@ntlworld.com> wrote:
> >
> >> >Now Collins/Rockwell make symmetrical filters. What are these
> >> >for? And, are the sideband filters not symmetrical in their
> >> >passband? TIA. Rich.
> >>
> >>
> >> The stated center frequency of a filter is usually the actual
> >center
> >> of the filter unless they are stated as upper or lower side
> >band
> >> filters.
> >
> >
> >Yes, so the Collins 455 Khz USB and LSB filters have different
> >center frequencies. 455 Khz refers to carrier
> >frequency.
> >
> >> The situation with Collins 455 khz filters is that is the
> >center
> >> frequency (455) khz. The carrier is set to one edge or the
> >other for
> >> upper or lower side band operation. That puts the side band
> >energy in
> >> the center of the filter.
> >
> >This is just for the symmetrical filter, ie, *not* stated as
> >being a LSB or USB SSB filter. I guess this filter is for when
> >you move the carrier into correct position, as contrasted with
> >keeping the carrier at 455 Khz and swapping filters.
>
> You have it right. However all the 455 khz Collins filters that I can
> think of off hand are symmetrical filters and have the carrier offset
> to one side or the other. I also can't think of any collins filters
> that are not symmetrical no matter what they were made for.

>
> Non symmetrical filters were usually crystal filters that were built
> with a small number of crystals. With only 2 or 4 crystals in a filter
> it is difficult to get good steep skirts on both sides of the filter.
> So they were often made with emphasis on one skirt for best side band
> suppression on that side. The other side would roll off less sharply.
> By using more crystals in the filter it is easier to get steep skirts
> on both sides of the filter.
>
> A common filter arrangement that was used by collins was a 500 khz
> filter. These were usually upper or lower side band filters with the
> carrier at 500 khz.
>
> Most 455 khz filters that you come across will have a center frequency
> of 455. These need the carrier set to one side or the other.
>
> 73
> Gary K4FMX

My, rather old, Collins mechanical filter catalog shows a series of "bandpass" symmetrical filters including the popular 455 kHz 2.1 kHz wide models; and a series of SSB asymmetrical filters, which are mostly a little wider - i.e. 2.7, 3.1 etc. In both cases they are available for IFs from 250 kHz to 500 kHz. There were also a series of multiplex sideband filters fro 60 to 108 kHz but they were bulky and not encountered in consumer equipment.

The asymetrical filters show a very steep characteristic on the carrier side and a much more gradual slope on the other side.

Dave

2530. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 03:45:06 UTC
From: Dennis <dgittens@adelphia.net>
Message-ID: <3E8A5CC5.4050500@adelphia.net>
Source record: 36431

Dave,

I have also used Ocean State electronics, www.oselectronics.com, with
good results.

73...

Dennis, KD5PGD

David Drumheller wrote:
> I'd like to design and build some equipment, but don't know
> where to buy transistors, ICs and other small parts over-the-counter in
> Washington, DC or Baltimore, MD. Years ago, Radio Shack offered such item
> for
> sale, but the chain has now evolved into a consumer electroncs retail store.
> The selection of parts was never spectacular, but at least you could find
> one of these store near your home.
>
> So where can I go these days? I'd like to browse through the parts myself,
> and I'm reluctant to mail order stuff I haven't seen and touched.
>
> -Dave, K3WQ
> david@drumheller.org
>
>
>

2531. Re: Collins/Rockwell filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 05:50:36 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6dtk9$4d4ot$1@ID-150848.news.dfncis.de>
Source record: 36433

"Dave Holford" <holford@sympatico.ca> wrote in message
news:3E8A5B44.60D49411@sympatico.ca...

>
> My, rather old, Collins mechanical filter catalog shows a
series of
> "bandpass" symmetrical filters including the popular 455 kHz
2.1 kHz
> wide models; and a series of SSB asymmetrical filters, which
are mostly
> a little wider - i.e. 2.7, 3.1 etc. In both cases they are
available for
> IFs from 250 kHz to 500 kHz. There were also a series of
multiplex
> sideband filters fro 60 to 108 kHz but they were bulky and not
> encountered in consumer equipment.
>
> The asymetrical filters show a very steep characteristic on the
carrier
> side and a much more gradual slope on the other side.
>
> Dave

It seems to me that the symmetrical filters are used when you
move the carrier over from one side to the other of the passband.
And I would think that the USB and LSB filters are assymetrical,
because the carrier frequency stays put and you can thefore make
use of each filters assymetry. But, that's assuming the LSB and
UB filters are assymetrical and there's an advantage in that.

2532. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 06:19:26 UTC
From: Richard Karlquist <richard@karlquist.removethis.com>
Message-ID: <Ohvia.334759$S_4.297054@rwcrnsc53>
Source record: 36434

"Dan Tayloe" <dtayloe@cox.net> wrote in message
news:3E8A3BEE.E10F2934@cox.net...
> The distortion you are referring to is a symptom of a problem with the
> oscillator, and probably means the signal has excessive sideband noise
> that will affect its operation more significantly than its harmonic
> content.

There are two distinct issues here: harmonic content and phase noise.
I believe the original poster was talking about harmonic content. In
a crystal oscillator, the close in phase noise is normally determined
by the intrinsic noise of the crystal, and the far out noise floor is
normally determined by the buffer amplifier following the oscillator.
Hence, oscillator design has little effect on phase noise in general,
and in any event, even the worst crystal oscillator still has phase
noise that is quite adequate for a 20 meter radio. It is far more likely
that if there was a phase noise problem, it would be due to noise
on the tuning voltage of the varactor used to pull the oscillator.

Harmonic content in oscillators can frequently be minimized by
taking the output through the crystal. For example, if the oscillator
is designed so that one terminal of the crystal is grounded, then the
connection from the crystal to ground can be replaced by a grounded
base amplifier, which has a few ohms of input impedance. The crystal
then acts as a crystal filter.

> Beyond the sideband noise issue, any mixer will generate a lot of
> harmonics on its own as part of the switching/mixing process, so the
> harmonic content is not as much of an issue as sideband noise

Here is a frequent misconception we see on the net. For optimum
performance, a mixer such as the SBL-1 should driven with a sine
wave LO. Any even order harmonics in the LO unbalance the mixer
and degrade IMD performance. Mixers don't generate even harmonics,
so the argument that "any mixer will generate a lot of harmonics" doesn't
apply. So why not drive the mixer with a square wave? Well, first
of all, you have to guarantee that the square wave is exactly "square"
ie, it doesn't contain even harmonics. Even if that constraint is met,
you then have the problem of getting the square wave to propagate
through the balun transformer in the mixer without distortion. The
phase shifts at different harmonic frequencies will in general be different,
so the diodes will not see a square wave, but rather a distorted mess.

> If nothing else, a low pass filter can be used to clean a harmonic problem
> up especially if the signal has a symmetry problems.

Now here is some good advice. Simply put a low pass filter
between the VXO and mixer. You will find that the mixer
works best if filter element nearest the mixer is a series
inductor, rather than the more common shunt capacitor.
A little known fact.

Rick N6RK
www.n6rk.com

>
> - Dan, N7VE
>
> gary wrote:
> >
> > Ive built a 20 meter VXO an am using it to drive a sbl-1 LO to produce
> > DSB. The VXO output waveform is not the best, in spite of all my
> > efforts. The question is, how important is LO purity into these diode
> > modulators. Should I lowpass filter the VXO output before feeding the
> > sbl-1. Does it matter since the diodes switch on and off anyway?
> >
> > Gary
> >
> > W4AF

2533. Re: Where to buy semirigid coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 06:37:24 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304012237.2110f384@posting.google.com>
Source record: 36435

"Ake" <SM2FNI.non@telia.com> wrote in message
news:<P9nia.3558$Du.11488@newsc.telia.net>...
...
> > > >> On 31 Mar 2003 11:58:11 -0800, k7itm@aol.com (Tom Bruhns) wrote:
> > > >> |Anyone have pointers on where to buy small quantities of small
> > > >> |semirigid coax at a reasonable price?

...
> Look at: http://www.xs4all.nl/~barendh/Indexeng.htm

Thanks, Ake, but OUCH those are steep prices. 27euro/m??

Cheers,
Tom

2534. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 07:44:55 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <rqvk8v4o898ra472t7pba22rh897ksvp4l@4ax.com>
Source record: 36437

On 1 Apr 2003 10:44:48 -0800, gpatterson53@hotmail.com (gary) wrote:

>Ive built a 20 meter VXO an am using it to drive a sbl-1 LO to produce
>DSB. The VXO output waveform is not the best, in spite of all my
>efforts.

Did you measure the VXO waveform driving a resistive load or an actual SBL-1 mixer ? The mixer LO port does not necessarily represent a clean constant resistive load during the whole LO cycle during the diode switching periods. In the worst case you may have a variable resistance and/or variable reactance in parallel with the frequency determining reactances of the oscillator, causing waveform deterioration and phase modulation (phase noise). A buffer amplifier or at least an attenuator pad will reduce the effects of this variable load to the oscillator.

Paul OH3LWR

2535. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 11:42:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <sMDia.513$R43.96265@newsfep1-win.server.ntli.net>
Source record: 36446

> Anybody ever dealt with the cheap LCR meters versus the older genrad
> type bridges? If so, how do they compare? Can you get good accurate
> readings on the digital meters? Even on very low readings such as 4 or
> 5 picofarads?
==========
For your information ,I am using a Thandar - Model TC200 LCR meter with 3 1/2 digit LCD readout ,made by Thandar Electronics -Huntingdon - Cambridge-shire - UK ,its minimum cap range is 0 -200 pF (stated uncertainty +/- 1 % + 1 LS digit).

The instument 's test condition is 1 kHz and 100 mV.

I am happy with the instument ,but even with cap stuck directly into the instument connections (hence without test leads) ,I have to accept it that a cap of say 10 pF can not be measured with an uncertainty better than 10 %.

It should also be realised that the capacitance will change with frequency as can be shown for example when measuring the capacitance with a MFJ antenne analyser while changing the frequency.

Frank gm0csz.kn6wh@ntlworld.com

2536. Audio Equalizer For Ham Use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 11:57:20 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <AeAia.10441$cO3.667305@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36438

Has anybody ever used an audio equalizer with their transceiver? I picked up a radio shack 7 band frequency equalizer made for a car, (12 vdc). I believe at one time one of the amateur radio magazines had a how-to article.

2537. Re: Audio Equalizer For Ham Use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 13:23:52 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <IvBia.10522$cO3.671232@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36439

Not real useful in my opinion... the audio of a ham radio is hardly hi-fi...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:AeAia.10441$cO3.667305@bgtnsc04-news.ops.worldnet.att.net...
> Has anybody ever used an audio equalizer with their
> transceiver? I picked up a radio shack 7 band frequency
> equalizer made for a car, (12 vdc). I believe at one time
> one of the amateur radio magazines had a how-to article.

2538. Re: Audio Equalizer For Ham Use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 13:38:45 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <FJBia.10533$cO3.671728@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36440

I meant as an audio filter as opposed to hi-fidelity.
"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:AeAia.10441$cO3.667305@bgtnsc04-news.ops.worldnet.att.net...
> Has anybody ever used an audio equalizer with their
> transceiver? I picked up a radio shack 7 band frequency
> equalizer made for a car, (12 vdc). I believe at one time
> one of the amateur radio magazines had a how-to article.
>
>
>

2539. Re: Audio Equalizer For Ham Use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 14:24:59 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000054.00143fc8@btinternet.com>
Source record: 36441

Hi,

> Has anybody ever used an audio equalizer with their
> transceiver? I picked up a radio shack 7 band frequency
> equalizer made for a car, (12 vdc). I believe at one time
> one of the amateur radio magazines had a how-to article.

QST, March 2003, has an article by W5TOM about a homebrew shack microphone in which he achieved some improvement in clarity using bass and mid-range boosts. So, I cannot see any reason why similar results could not be obtained with an in-line equaliser such as yours. On the receive side it might help as well. Not as good as a DSP box perhaps but at least worth a try.

Cheers - Joe

2540. (OT) Anyone out ther use HotBot?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 14:34:58 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <4qCia.28065$G6.24901@fe01.atl2.webusenet.com>
Source record: 36442

I used to like it until they changed the way it worked a month or two ago.

They used to have just a single text field where you enter your keywords, and a switch to select "Exact Phrase", "All The Words", etc. Now you have to enable a filter with its own text field. This means you have two places to enter your keywords, the main (original) field and the filter.

The 'original' field seems to be stuck on 'Any Of The Words'. If you leave it blank and enter only in the filter, it tells you that "" (null field, no characters) is Adult Content (I will say that is one thing they got right, you can select the degree of protection you want). So, you have to put your keywords in both fields...

An example. Yesterday I wanted to search for High Impedance Headphones, with "High Impedance" being an exact phrase. What it gave me was web sites for 'High', 'impedance', 'High Impedance', and 'Headphones'!!

And it said that the search was done on:

high impedance headphones "high impedance" headphones
^^^^^^^^^^^^^^^^^^^^^ any of the words
^^^^^^^^^^^^ exact phrase
^^^^^^^^^^^^^^^^^^^^^^ all
of the words

Anyone know how to make this work? What other search engines do people use (besides Google). Google is ok for searching archives, but I don't care for it much for searching the web.

Jim
N8EE

2541. Re: (OT) Anyone out ther use HotBot?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 14:49:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <e27dCJPxhvi+EAx3@ifwtech.co.uk>
Source record: 36443

JLB wrote:
>What other search engines do people use (besides Google). Google is ok
>for searching archives, but I don't care for it much for searching the
>web.

I don't like one-line search forms of any description. For complete
control over what to include *and* exclude at the same time, try:

Web - http://www.google.com/advanced_search

Newsgroups - http://groups.google.com/advanced_group_search

Actually they're not "advanced" at all - just perfectly clear.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2542. Measurements 59LF grid dip ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 15:13:00 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v8lvg3ibbm7l8c@corp.supernews.com>
Source record: 36444

For my Measurements Model 59LF grid dip meter I'm still trying to find a manual or copy and hopefully a 50kc to 100kc coil or an old orphaned LF coil form with the ferrite. The form was made by American Phenolic Corp, Chicago, Part No. 24-5P. The base is like an old 5 pin tube and is a clear cylinder about 1 1/4" diameter and 2 1/4" long, "pill bottle". The coil form, a ferrite cylinder about 1 inch diameter and 3/4" long is inside the "pill bottle" . I'd guess there's several hundred turns of litz wire wound pancake fashion with 5 leads coming out. The .1 - .25 MC coil wire uses about 3/4 ths of the ferrite length and the turns stack up to about an 1/8" thick. It's well designed and well made and has some weight to it. The unit has 3 additional coils, .25 -.55 MC, .55MC - 1.5 MC, and 1.5 - 4.5 MC. All use the same form but with less turns, the highest freq. coil has about 1/20th of the turns. I'd rather find one covering .05 - .1 MC or an orphaned LF form for another frequency if I can because I think it would be a major endeavor to try make one as good as Measurements!.
tnx.
hank wd5jfr

2543. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 15:57:17 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0304020757.1b00b5e@posting.google.com>
Source record: 36445

Yes ive terminated it with 50 ohms ....it looks ok, but i was
expecting a perfect sine wave out of a crystal osillator. Its a
2n2222 osc lightly coupled to a fet into another 2n2222 with a tuned
output and link coupled into the sbl-1. I was putting about 13dbm
into the LO input, ive padded this down to 7dbm and now the sbl-1
output looks much better, and looking at the LO input with the scope,
it looks much cleaner. I read you could put more than 7dbm in, but
when I do, with no IF modulation I see a ragged approximation of the
LO on the output. Im building a phasing ssb rig. Got the two sbl-1s
feeding a psc-2-4.

Gary
W4AF

Paul Keinanen <keinanen@sci.fi> wrote in message
news:<rqvk8v4o898ra472t7pba22rh897ksvp4l@4ax.com>...
> On 1 Apr 2003 10:44:48 -0800, gpatterson53@hotmail.com (gary) wrote:
>
> >Ive built a 20 meter VXO an am using it to drive a sbl-1 LO to produce
> >DSB. The VXO output waveform is not the best, in spite of all my
> >efforts.
>
> Did you measure the VXO waveform driving a resistive load or an actual
> SBL-1 mixer ? The mixer LO port does not necessarily represent a clean
> constant resistive load during the whole LO cycle during the diode
> switching periods. In the worst case you may have a variable
> resistance and/or variable reactance in parallel with the frequency
> determining reactances of the oscillator, causing waveform
> deterioration and phase modulation (phase noise). A buffer amplifier
> or at least an attenuator pad will reduce the effects of this variable
> load to the oscillator.
>
> Paul OH3LWR

2544. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 16:20:18 UTC
From: john graesser <graesser@tca.net>
Message-ID: <v8m3e8bsvokf9b@corp.supernews.com>
Source record: 36347

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:sMDia.513$R43.96265@newsfep1-win.server.ntli.net...
> > Anybody ever dealt with the cheap LCR meters versus the older genrad
> > type bridges? If so, how do they compare? Can you get good accurate
> > readings on the digital meters? Even on very low readings such as 4 or
> > 5 picofarads?
> ========================
> For your information ,I am using a Thandar - Model TC200 LCR meter with 3
> 1/2 digit LCD readout ,made by Thandar Electronics -Huntingdon -
> Cambridge-shire - UK ,its minimum cap range is 0 -200 pF (stated
uncertainty
> +/- 1 % + 1 LS digit).
>
> The instument 's test condition is 1 kHz and 100 mV.
>
> I am happy with the instument ,but even with cap stuck directly into the
> instument connections (hence without test leads) ,I have to accept it
that
> a cap of say 10 pF can not be measured with an uncertainty better than 10
%.
>
> It should also be realised that the capacitance will change with frequency
> as can be shown for example when measuring the capacitance with a MFJ
> antenne analyser while changing the frequency.
>
> Frank gm0csz.kn6wh@ntlworld.com

If I am understanding you correctly you are getting better readings than
the specs promise. If you can get a reading of +-10% on a 10pf test, then it
is worlds better than the error of 1 ls digit. That would be +- 9pf, which
for your test would be +- 90%. Any single digit reading would be totally
worthless since they already tell you that the ls digit isn't real.
thanks, John.
KC5DWD

2545. Need circuit help please ? - Mixer2.jpg (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 16:39:06 UTC
From: mjerry@intrstar.net
Message-ID: <7a4m8vg613inka4ft6h5hdstqig24b24tg@4ax.com>
Source record: 36348

I'm new to ham and just beginning to brush up on my electronics so any helpwould be greatly appreciated.

Attached is a schematic for a microphone mixer with bass/treble controls that I found on the web and am thinking about building but have a question.

On U2 would the circuit not need a resistor in line from the output back tothe inverting input, as is used on U1?

It just seemed to me (with my limited knowledge) that without it the entire signal would be fed back to the inverting input and cancel all output fromU2.

If the resistor is needed would I use a similar value to R7 on U1?

Thanks for the help !!!!
Jerry

2546. Re: Need circuit help please ? - Mixer2.jpg (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 16:53:32 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93515A740F4E6pookster@216.168.3.50>
Source record: 36349

mjerry@intrstar.net wrote in news:7a4m8vg613inka4ft6h5hdstqig24b24tg@4ax.com:

> Attached is a schematic for a microphone mixer

Many newsreaders filter out attachments. Better to place the .jpg file on a website and post the address.

--
Bill, W7TI

2547. Need circuit help - forgot attachment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 16:53:32 UTC
From: mjerry@intrstar.net
Message-ID: <d95m8vcquhmnsccajbgu3ftoa26hvo6od9@4ax.com>
Source record: 36350

I'm new to ham and just beginning to brush up on my electronics so any
helpwould be greatly appreciated.

Attached is a schematic for a microphone mixer with bass/treble
controls that I found on the web and am thinking about building
but have a question.

On U2 would the circuit not need a resistor in line from the output
back tothe inverting input, as is used on U1?

It just seemed to me (with my limited knowledge) that without it the
entire signal would be fed back to the inverting input and cancel all
output fromU2.

If the resistor is needed would I use a similar value to R7 on U1?

Thanks for the help !!!!
Jerry

ï¿½ï¿½ï¿½ï¿½ï¿½

2548. Re: WTB shaft adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 17:11:20 UTC
From: "Scott M." <scottzm@netzcommander.com>
Message-ID: <3e8b15cc$1_4@corp-goliath.newsgroups.com>
Source record: 36351

Surplus Sales of Nebraska has these.

"Bob G. Mahrenholz" <bobm@edge.net> wrote in message
news:3E88EA50.AA27803E@edge.net...
>
>
> Paul and Linda Cooper wrote:
>
> > WTB shaft adapters, both 1/4" and 3/8", all metal, with two set screws
> > each side.
> >
> > Need 3/8" shaft inside to 1/4" solid shaft outside; Need 3/8" shaft
> > inside to 3/8" shaft inside;
> > Need 1/4" shaft inside to 1/4" shaft inside.
> >
> > The adapters will probably be no longer than 1.5" overall.
> >
> > Paul, K6PY
>
> Try: www.hhsmith.com
> and look under "shaft accessories". They have an inventory locator so you
> can see which of their distributors has the part in stock. I found some
> shaft extensions thru them.
>
> Bob, K4QQK
>
>

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2549. Reed relay for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 17:26:20 UTC
From: Wim Ton <wimton@blueyonder.co.uk>
Message-ID: <7%Eia.13465$Ti5.338@news-binary.blueyonder.co.uk>
Source record: 36352

To what freqencies can you use a small reed-relay and what isolation and insertion losses can you expect at say 1 GHz

Thanks in advance, Wim

2550. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 19:42:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8mf8sj0ru65c3@corp.supernews.com>
Source record: 36353

I'm not sure what you expect to see. When you're properly driving an SBL-1 you should see a pretty square wave at the LO port, and a chopped looking waveform at the output. Most of the buffers I use following an oscillator have an output impedance considerably lower than 50 ohms, so I generally connect a 47 ohm resistor between the buffer output and the mixer. The buffer output usually looks fairly clean, but the SBL-1 input, on the other side of the resistor, is squared off due to hard diode conduction. The mixer needs to be driven hard enough to cause the diodes to switch, for proper operation.

Roy Lewallen, W7EL

gary wrote:
> Yes ive terminated it with 50 ohms ....it looks ok, but i was
> expecting a perfect sine wave out of a crystal osillator. Its a
> 2n2222 osc lightly coupled to a fet into another 2n2222 with a tuned
> output and link coupled into the sbl-1. I was putting about 13dbm
> into the LO input, ive padded this down to 7dbm and now the sbl-1
> output looks much better, and looking at the LO input with the scope,
> it looks much cleaner. I read you could put more than 7dbm in, but
> when I do, with no IF modulation I see a ragged approximation of the
> LO on the output. Im building a phasing ssb rig. Got the two sbl-1s
> feeding a psc-2-4.
>
> Gary
> W4AF

2551. Re: Is this REALLY an sx28?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 20:36:55 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <HRHia.10932$cO3.701928@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36354

"scharkalvin" <wa2mze@bellsouth.net> wrote in message
news:3E88ED27.3050207@bellsouth.net...
> Found this on ebay. If this is really a military version of the
> Halicrafters SX28, it is some
> repackage job. I've never seen on of these. Tacky dymo tape labels on
> the panel. Not original at
> any rate.
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015496277&category=15051
>
>

Chuck Dachis shows one in his "Radios by Hallicrafters" book. He has it as a R-45/ARR-7. He says "Electrically this set is very similar to the SX-28 although it is physically very different." and "While both the R-44 and R-45 are relatively common it is difficult and unusual to find either with the tuning motor assembly intact." The R-44 is the same size as the R-45, but is based on the S-36 chassis. Dosn't look like either the R-45 or R-44 have push pull outputs.

Frank Dresser

2552. Need comments on xtal osc down converter for LF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-02 23:22:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3e8b6d78.201620364@news.online.no>
Source record: 36355

Planning to build an xtal controlled source for 136kHz based on the
xtal synthesizer principle, but it is unlikely
that I need more than one xtal. Have many xtals around 6520kHz and
this is the reason for choosing this set frequencies.
The output from mixer is 4x (136-136.5kHz) and I suppose filtering is
rather easy task so I would use a 455kHz IF
transformer
Need comments whether it is a very bad mixer (bias circuits are not
shown). It is important to have maximum signal out
but mixer products are supposed to be far away from this frequency, so
I just wonder if it is neccessary to make it more
complicated? A 40673 mixer is another possibility, it has very high
gain on such low frequencies, but I would rather
prefer bipolars if it is no reason for choosing something else. IC's
are no problem, but why use it if it is just foolish?

Just awaiting some comments before I start the deadbug method mounting
in the next days

See the schematic on http://home.online.no/~la8ak/90.htm

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

2553. CATV info required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 01:01:14 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1049331672.107520@auth2.dns.griffin.net.uk>
Source record: 36356

ok decided on spectrum analayzer design...now i have a catv tuner i wish to use,does anyone have the pin out on it and any other info ie max frequency etc....(i have worked out most of them including varicap tune and output) but more info would be good..

it is out of an Scientific- Atlanta inc CATV converter model 8602 for the UK market..

thanks simon g0zen

2554. ptfe coax supplier.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 01:05:55 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1049331953.369791@auth2.dns.griffin.net.uk>
Source record: 36357

looking for supplier of small amounts of ptfe 50r (and 75r) coax...needs to
be about 3.3mm dia..taking fairly large amounts of power..I have 5mm and
1.8mm but i cant find 3.3mm anywhere.I know it is made as I have a very
small quantity, but not enough!!
have tried westlake in the uk and baren in holland..

thanks simon g0zen

2555. Re: cheap RF switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 02:44:36 UTC
From: N2VX <nospam@nospam.com>
Message-ID: <pv6n8v0d5qrcq6uunluclrbhih8ciegvf4@4ax.com>
Source record: 36358

On Tue, 01 Apr 2003 20:24:54 -0300, Paulo Marcondes
<pepm@osite.com.br> wrote:

>Roy Lewallen wrote:
>>
>> I've used small power relays for antenna and directional array switching
>> for many years. The only problem I've had, and that you might have when
>
>This thread has eased me a bit...Specially when someone like
>you, Roy, tell this kind of assuring thing.
>
>I was looking for suitable relays to homebrew a remote
>antenna switch...I saw John's (EI7BA) homepage and he says
>only good things about his remote switch. But I was somewhat
>afraid of building the thing...People advised me: "get some
>RF relays", but the price is high, and I'm on a budget...
>
>I think I can go the power relay way...

The early/mid-70's ARRL handbooks had a 2 meter
amp project. It used a MRF-240 or something like that.
I know it was in the 1974 handbook.

Part of the project was modifying a standard power relay for
T/R switching. It was something like a 4PDT relay with
long internal wires removed and jumpers added. Losses
were claimed to be 0.2 db or so at 2 meters.

For another option look in the DigiKey catalog for Omron
RF relays. They have some fairly low loss models in the
$6 range.

73,
Jim
N2VX

2556. Re: Where to buy electronics parts in Washington, DC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 02:53:28 UTC
From: Kim_Jong_Il@volcanomail.com
Message-ID: <26a0f230.0304021853.5c3c7f1b@posting.google.com>
Source record: 36359

"David Drumheller" <david@drumheller.org> wrote in message
news:<3e876b41_6@vienna7.his.com>...
> So where can I go these days?

Arlington Electronic Wholesaler. They used to be on Lee Highway, but
they are over by Ft. Myer now.

2557. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 03:09:53 UTC
From: Richard Karlquist <richard@karlquist.removethis.com>
Message-ID: <5CNia.70679$Zo.16528@sccrnsc03>
Source record: 36360

"John Moriarity" <k6qq@hdo.net> wrote in message
news:v8l313skf35r98@corp.supernews.com...
> > ... You will find that the mixer
> > works best if filter element nearest the mixer is a series
> > inductor, rather than the more common shunt capacitor.
> > A little known fact.
>
> An explanation, please?
>
> 73, John - K6QQ

It has to do with the termination of the harmonics. A choke
output filter (recommended) terminates the harmonics in
an open circuit; ie it behaves as a current source. A capacitor
output filter terminates the harmonics in a short circuit; ie it behaves
as a voltage source. In the former case, the filter is forcing
a sine wave current through the diodes. The time varying impedance
of the diode is proportional to the logarithm of sin wt, which is
a well behaved function that approximates an ideal switch. In the
latter case, the filter is trying to force a sine wave voltage across
the diodes. In this case, the time varying impedance of the
diode is proportional to the anti-logarithm of sin wt. This is
NOT a well behaved function and it does NOT approximate an
ideal switch very well. Hope that helps. It's a little hard to
explain, but if you look at the voltages and currents in a real
circuit, it is really obvious which version works better.

Rick N6RK

2558. Re: Reed relay for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 03:11:33 UTC
From: Richard Karlquist <richard@karlquist.removethis.com>
Message-ID: <FDNia.309294$L1.87618@sccrnsc02>
Source record: 36361

Ordinary ones are good to several hundred MHz. Omron
makes some RF relays that go into the GHz range.

Rick N6RK

"Wim Ton" <wimton@blueyonder.co.uk> wrote in message
news:7%Eia.13465$Ti5.338@news-binary.blueyonder.co.uk...
> To what freqencies can you use a small reed-relay and what isolation and
> insertion losses can you expect at say 1 GHz
>
> Thanks in advance, Wim
>
>

2559. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 06:23:02 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3E8BD346.E039CC73@eoni.com>
Source record: 36362

Oh, the meter will read the same cap the same every time; you can zero
the leads first so you're only reading the cap--so it should work fine
if you need to match a cap.
Steve

J M Noeding wrote:
>
> On Mon, 31 Mar 2003 19:59:09 -0800, Steve Ratzlaff
> <steveratz@eoni.com> wrote:
>
> >I love my AADE meter for the inductance function, but the capacitance
> >function does not do so well. Checking with precision caps, mine had a
> >4-6% error, sometimes high sometimes low. My 2 other commercial LCR
> >meters were under 1% on capacitance--but they were very poor on
> >inductance (the main reason I got the AADE kit).
> >Steve
> >
>
> and what sort of figure would it be for relative successive
> measurements? It is what counts when you need to select equal as
> possible devices, but the absolute value is less important
>
> 73
> Jan-Martin
> LA8AK
> Technical topics http://home.online.no/~la8ak/
>
> --
> remove ,xnd to reply

2560. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 06:44:59 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <v8qafc98keh547@corp.supernews.com>
Source record: 36386

> The Rad Lab book would be an interesting reference, especially because
> the patent I have for the diode ring (2,695,988; Nov. 30, 1954) was
> issued to a fellow who had worked at Rad Lab. Unfortunately, I don't
> know if it's for work he originally did there or not...I think it was
> subsequent to that.

Volume 16, "Microwave Mixers", only has one double-balanced
mixer, and it is in a waveguide structure.

Volume 19, "Waveforms", has a fair amount about balanced
mixers, but not in real "design" depth. A footnote refers to
Caruthers' paper.

According to the Index Volume, these are the only references
in the Rad Lab series.

I seem to recall references to "ring" modulators as early as 1918
or so, elsewhere.

73, John - K6QQ

2561. First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 07:14:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304022314.32736f97@posting.google.com>
Source record: 36363

Hi all,

What was the earliest that the diode ring double-balanced mixer occured? I have a reference to it in the early 1950's and wonder if anyone knows of it before that. My reference points to a few earlier uses of a diode bridge DBM, as opposed to a diode ring, but so far it's the earliest I've seen of the ring.

(BTW, thanks to Rick Karlquist for his note in another thread about the best way to drive modern diode DBM LO ports.)

Cheers,
Tom

2562. pic 16f629 uk supplier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 13:22:49 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1049376230.907280@auth2.dns.griffin.net.uk>
Source record: 36364

anyone know where to get 16f629 pics??
tried my usuall suppliers no can do...
rs no
cpc no
etc...
help!!

thanks simon G0ZEN

2563. Re: pic 16f629 uk supplier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 14:48:38 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <pmCdnTFF9P4n1xGjXTWcog@comcast.com>
Source record: 36365

try www.rentron.co.uk

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1049376230.907280@auth2.dns.griffin.net.uk...
> anyone know where to get 16f629 pics??
> tried my usuall suppliers no can do...
> rs no
> cpc no
> etc...
> help!!
>
> thanks simon G0ZEN
>
>

2564. Re: pic 16f629 uk supplier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 14:55:55 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <bLednThkkafy0RGjXTWc3Q@comcast.com>
Source record: 36366

Mea maxima culpa (That's I'm very sorry!), try the link to Crownhill:
http://www.crownhill.co.uk/cat54_1.htm

"john walton" <jdwalton@comcast.net> wrote in message
news:pmCdnTFF9P4n1xGjXTWcog@comcast.com...
> try www.rentron.co.uk
>
> "zindazenda" <zen@lineisp.co.uk> wrote in message
> news:1049376230.907280@auth2.dns.griffin.net.uk...
> > anyone know where to get 16f629 pics??
> > tried my usuall suppliers no can do...
> > rs no
> > cpc no
> > etc...
> > help!!
> >
> > thanks simon G0ZEN
> >
> >
>
>

2565. Re: Is this REALLY an sx28?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 16:14:13 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E8C5DBA.F2203630@att.net>
Source record: 36367

Frank Dresser wrote:

> "scharkalvin" <wa2mze@bellsouth.net> wrote in message
> news:3E88ED27.3050207@bellsouth.net...
> > Found this on ebay. If this is really a military version of the
> > Halicrafters SX28, it is some
> > repackage job. I've never seen on of these. Tacky dymo tape labels on
> > the panel. Not original at
> > any rate.
> >
> >
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015496277&category=15051
> >
> >
>
> Chuck Dachis shows one in his "Radios by Hallicrafters" book. He has it as
> a R-45/ARR-7. He says "Electrically this set is very similar to the SX-28
> although it is physically very different." and "While both the R-44 and
> R-45 are relatively common it is difficult and unusual to find either with
> the tuning motor assembly intact." The R-44 is the same size as the R-45,
> but is based on the S-36 chassis. Dosn't look like either the R-45 or R-44
> have push pull outputs.
>
> Frank Dresser

That's interesting, Frank. I've owned several SX28's and have one now, but I
missed that
variant. But I don't have Chuck's book, either.

Dick

2566. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 16:39:29 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b6ho41$22r$1@freenet9.carleton.ca>
Source record: 36368

Tom Bruhns (k7itm@aol.com) writes:
> Hi all,
>
> What was the earliest that the diode ring double-balanced mixer
> occured? I have a reference to it in the early 1950's and wonder if
> anyone knows of it before that. My reference points to a few earlier
> uses of a diode bridge DBM, as opposed to a diode ring, but so far
> it's the earliest I've seen of the ring.
>
> (BTW, thanks to Rick Karlquist for his note in another thread about
> the best way to drive modern diode DBM LO ports.)
>
> Cheers,
> Tom

This is a good question. The 1953 ARRL sideband book has an article
from QST for June 1949 which shows a ring modulator using copper oxide
diodes.

I don't really have any earlier references, and can't think of anything
that would specifically mention something about this.

Over the years, I've seen plenty about the origins of diode modulators
being in telephone circles. But it's not clear whether the bridge or
ring came first. The 1958 CQ sideband book shows a ring modulator and
refers to it as "the classic circuit used by the telephone companies
for the land line ssb generators". It mentions copper oxide rectifiers,
and how hams had used such a circuit in the under 50KHz range.

It then shows a Collins ring modulator, which is slightly more complicated,
but does away with the transformers; it specifically mentions the KWM-1.

But this section on diode modulators starts off with the bridge modulator,
not giving any word on it's origins. And I don't recall ever seeing
a bridge modulator in ham publications.

Michael VE2BVW

2567. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 16:45:35 UTC
From: Richard Karlquist <richard@karlquist.removethis.com>
Message-ID: <PyZia.314391$L1.88735@sccrnsc02>
Source record: 36369

A well known early reference is Caruthers paper in the
Bell System Technical Journal in 1939, the title is
something like "Copper oxide rectifiers in telephone
modulators". Also, the Rad Lab series has a whole
volume on mixers. Not sure if any of these are ring
topology though.

Rick N6RK

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0304022314.32736f97@posting.google.com...
> Hi all,
>
> What was the earliest that the diode ring double-balanced mixer
> occured? I have a reference to it in the early 1950's and wonder if
> anyone knows of it before that. My reference points to a few earlier
> uses of a diode bridge DBM, as opposed to a diode ring, but so far
> it's the earliest I've seen of the ring.
>
> (BTW, thanks to Rick Karlquist for his note in another thread about
> the best way to drive modern diode DBM LO ports.)
>
> Cheers,
> Tom

2568. Want: Weller WTCPT Soldering Station

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 17:30:02 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <uc_ia.12544$cO3.799388@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36371

Where can i purchase a new WTCPT Soldering
Station? I tried C&S Sales but all i get is an
answering machine.

2569. Vintage Coils FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 17:32:18 UTC
From: G4BXD@qsl.net
Message-ID: <3e8c66e3.783526@news.compuserve.com>
Source record: 36370

Vintage Coils FS

selection of coils by 'Raymart.
ribberd formers, various windings
11 x 6 pin types with extra regen winding
6 x 4 pin types ae or osc usage
plus 1 x 6 pin base, 2 x 4 pin base, 1 x 5 pin base(4 pin coil fits
though)
1 x vintage on/off switch
2 x variable caps,high grade, probably 250pf +-
plus info sheet.

2570. Re: ptfe coax supplier.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 18:31:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304031031.17edef93@posting.google.com>
Source record: 36372

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1049331953.369791@auth2.dns.griffin.net.uk>...
> looking for supplier of small amounts of ptfe 50r (and 75r) coax...needs to
> be about 3.3mm dia..taking fairly large amounts of power..I have 5mm and
> 1.8mm but i cant find 3.3mm anywhere.I know it is made as I have a very
> small quantity, but not enough!!
> have tried westlake in the uk and baren in holland..

Are you wanting flexible or semirigid? I believe 3.58mm = 0.141" is a
standard semirigid size. Thanks to an answer I got about my semirigid
source question, I know that Down East Microwave has both flexible and
semirigid, though I don't see any in exactly 3.3mm size. Have a peek
at http://www.downeastmicrowave.com/DEMICAT.pdf, in the "Coaxial
Cable, ..." section.

Cheers,
Tom

2571. 6m homebrew xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 18:54:17 UTC
From: "Keith A. Grimm" <kgrimm_77546@yahoo.com>
Message-ID: <3E8C8359.3010708@yahoo.com>
Source record: 36373

I seem to remember a circuit for a postage stamp 6 m transmitter published in 73(?) magazine somewhere around 1970. It used a single Motorola HEP 55 transistor that had to be filed down for size, a tuning coil from Piconics, a crystal from McCoy and 6 mercury batteries for power. The antenna was a 6 inch square of copper clad pc board and it was good for about 370 mw or so. The whole aim of the article was to get this transmitter to fit on a postage stamp and keep its thickness under 0.25 inches.

Does anyone else remember this and if so know where I can get a copy of that circuit?

2572. Re: Want: Weller WTCPT Soldering Station

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 20:32:12 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18f63a27c1dffc4f989834@192.168.42.131>
Source record: 36374

In article <uc_ia.12544$c03.799388@bgtnsc04-news.ops.worldnet.att.net>,
raghead@worldnet.att.net says...

> Where can i purchase a new WTCPT Soldering
> Station? I tried C&S Sales but all i get is an
> answering machine.

http://www.alliedelec.com

http://www.digikey.com

http://www.mouser.com

...And Lord only knows how many others. ;-)

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2573. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 21:26:04 UTC
From: Norm Kingston <normclar@Execulink.com>
Message-ID: <v8p9v57grbsrec@corp.supernews.com>
Source record: 36375

Re history of ring mixer have a look at www.analog-rf.com/mixer.shtml Quite interesting stuff.

Norm

"Tom Bruhns" <k7itm@aol.com> wrote in message news:3200347.0304022314.32736f97@posting.google.com...
> Hi all,
>
> What was the earliest that the diode ring double-balanced mixer
> occured? I have a reference to it in the early 1950's and wonder if
> anyone knows of it before that. My reference points to a few earlier
> uses of a diode bridge DBM, as opposed to a diode ring, but so far
> it's the earliest I've seen of the ring.
>
> (BTW, thanks to Rick Karlquist for his note in another thread about
> the best way to drive modern diode DBM LO ports.)
>
> Cheers,
> Tom

2574. Re: Weller WTCPT Soldering Station

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 21:46:22 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <OY1ja.12787$cO3.816545@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36376

http://www.contacteast.com/product/prodpage.cfm?grp=4F7A9B30-C870-11D4-8A700
050DA5FEB55

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:uc_ia.12544$cO3.799388@bgtnsc04-news.ops.worldnet.att.net...
> Where can i purchase a new WTCPT Soldering
> Station? I tried C&S Sales but all i get is an
> answering machine.
>
>

2575. Re: Need comments on VXO for VLF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 22:04:04 UTC
From: la8ak.xnd@online.no
Message-ID: <3e8caf6d.4902757@news.online.no>
Source record: 36377

On Wed, 02 Apr 2003 23:22:03 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>Planning to build an xtal controlled source for 136kHz based on the
>xtal synthesizer principle, but it is unlikely
>that I need more than one xtal. Have many xtals around 6520kHz and
>this is the reason for choosing this set frequencies.
>The output from mixer is 4x (136-136.5kHz) and I suppose filtering is
>rather easy task so I would use a 455kHz IF
>transformer
changed the circuits so it is easier to read on
http://home.online.no/~la8ak/90.htm
--
remove ,xnd to reply

2576. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 22:58:35 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304031458.71fd63e9@posting.google.com>
Source record: 36378

I don't have easy access to Caruthers' paper, but do note a patent to
him, US 2,086,602, July 13, 1937. That one is for a diode bridge, not
a ring.

The Rad Lab book would be an interesting reference, especially because
the patent I have for the diode ring (2,695,988; Nov. 30, 1954) was
issued to a fellow who had worked at Rad Lab. Unfortunately, I don't
know if it's for work he originally did there or not...I think it was
subsequent to that.

Cheers,
Tom

"Richard Karlquist" <richard@karlquist.removethis.com> wrote in message
news:<PyZia.314391$L1.88735@sccrnsc02>...
> A well known early reference is Caruthers paper in the
> Bell System Technical Journal in 1939, the title is
> something like "Copper oxide rectifiers in telephone
> modulators". Also, the Rad Lab series has a whole
> volume on mixers. Not sure if any of these are ring
> topology though.
>
> Rick N6RK
>
> "Tom Bruhns" <k7itm@aol.com> wrote in message
> news:3200347.0304022314.32736f97@posting.google.com...
> > Hi all,
> >
> > What was the earliest that the diode ring double-balanced mixer
> > occured? I have a reference to it in the early 1950's and wonder if
> > anyone knows of it before that. My reference points to a few earlier
> > uses of a diode bridge DBM, as opposed to a diode ring, but so far
> > it's the earliest I've seen of the ring.
> >
> > (BTW, thanks to Rick Karlquist for his note in another thread about
> > the best way to drive modern diode DBM LO ports.)
> >
> > Cheers,
> > Tom

2577. Re: (OT) Anyone out ther use HotBot?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 23:36:35 UTC
From: Sylvan Butler <Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnb8phc3.pmm.Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 36380

On Wed, 2 Apr 2003 15:49:21 +0100, Ian White, G3SEK <G3SEK@ifwtech.co.uk> wrote:
> JLB wrote:
>>What other search engines do people use (besides Google). Google is ok
>>for searching archives, but I don't care for it much for searching the
>>web.
>
> I don't like one-line search forms of any description. For complete
> control over what to include *and* exclude at the same time, try:
>
> Web - http://www.google.com/advanced_search

Of course, you can put all those fields on one line and I do it
every day. :) (and google will show you how, if you look at the
search field on the top of your results page)

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

2578. Re: Reed relay for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-03 23:39:37 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Du3ja.31662$G6.4165@fe01.atl2.webusenet.com>
Source record: 36379

It depends on how it is activated.

Once many moons ago I tried using one on 2 meters. It was the kind with a coil of wire wrapped around the contacts (as if the contacts were a metal core). As I quickly learned, this acted like an RF choke and there was absolutely no signal getting through.

Other designs may have the contacts outside of the coil magnet, or sued a permanent magnet. I have a gang switch for an RS-232 cable that is like this, with a big clunky mechanism to move the permanent magnets, but I don't think it will work very well for RF.

What I would suggest is look at the Fair Radio web site. They usually have some relays designed for RF at reasonable prices. Other places amy also have some.

Jim
N8EE

2579. WTB:DRAKE HF TR-7 FILTERS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 02:53:52 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <4t6ja.44443$ja4.2747318@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36381

Looking for additional filter(s) for Drake HF TR-7 other than the standard
one.
State price, condition etc.

WS0E

2580. Intersil Transistor Info Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 03:58:02 UTC
From: alihernlem@hotmail.com
Message-ID: <54058474.0304031958.422677d4@posting.google.com>
Source record: 36382

Anyone have a datasheet for an Intersil transistor marked ITS3322 and with date stamp 7043? This appears to be a dual matched n-channel JFET (has 6 leads).

Brad

2581. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 04:54:31 UTC
From: crabtreejr@aol.com
Message-ID: <20030403235431.01488.00000285@mb-fa.aol.com>
Source record: 36383

The reference to the paper by Caruthers is:
R.S. Caruthers, Copper Oxide Modulators in Carrier Telephone Systems, Bell System Technical Journal, pp 315-337, April 1939

He described 5 configurations of diode modulator, including the ring. He stated that by about 1931 copper oxide rectifiers began to be promising as serious competitiors to vacuum tubes in modulators. He went on:
"Since 1931 continued improvements in copper oxide regulators have rapidly increased their field of application until they are now employed in practically all of the latest types of carrier telephone systems.

The copper oxide rectifier was invented in ca. 1926.

73 John KC0GGH

Richard Karlquist richard@karlquist.removethis.com on 4/3/03 wrote:
>Message-id: <PyZia.314391$L1.88735@sccrnsc02>
>
>A well known early reference is Caruthers paper in the
>Bell System Technical Journal in 1939, the title is
>something like "Copper oxide rectifiers in telephone
>modulators". Also, the Rad Lab series has a whole
>volume on mixers. Not sure if any of these are ring
>topology though.
>
>Rick N6RK
>
>"Tom Bruhns" <k7itm@aol.com> wrote in message
>news:3200347.0304022314.32736f97@posting.google.com...
>> Hi all,
>>
>> What was the earliest that the diode ring double-balanced mixer
>> occured? I have a reference to it in the early 1950's and wonder if
>> anyone knows of it before that. My reference points to a few earlier
>> uses of a diode bridge DBM, as opposed to a diode ring, but so far
>> it's the earliest I've seen of the ring.
>>
>> (BTW, thanks to Rick Karlquist for his note in another thread about
>> the best way to drive modern diode DBM LO ports.)
>>
>> Cheers,
>> Tom

John Crabtree

2582. Re: 6m homebrew xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 06:20:05 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0304032220.7a6aa40e@posting.google.com>
Source record: 36384

"Keith A. Grimm" <kgrimm_77546@yahoo.com> wrote in message
news:<3E8C8359.3010708@yahoo.com>...
> I seem to remember a circuit for a postage stamp 6 m transmitter
> published in 73(?) magazine somewhere around 1970. It used a single
> Motorola HEP 55 transistor that had to be filed down for size, a tuning
> coil from Piconics, a crystal from McCoy and 6 mercury batteries for
> power. The antenna was a 6 inch square of copper clad pc board and it
> was good for about 370 mw or so. The whole aim of the article was to
> get this transmitter to fit on a postage stamp and keep its thickness
> under 0.25 inches.
>
> Does anyone else remember this and if so know where I can get a copy of
> that circuit?

If it was 1970, and that seems a good guess, I'd say it was the
March issue, and it was 73.

It was written by Bill Hoisington, K1CLL.

But it was just a single transistor oscillator, nothing unique.
Around that time, Bill was playing around with miniaturization,
and the fact that he was filing down plastic transistor cases
is an example of that. You could just use common sense to
make something as small as possible. Note that it was just
an oscillator; unless you were keying the supply line for
CW there was no modulation.

Michael VE2BVW

2583. How to connect Laipac

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 06:38:13 UTC
From: Gavin Jacobs <notasnoball@inhell.com>
Message-ID: <pL9ja.13004$de.1619674@news2.telusplanet.net>
Source record: 36385

I have a Laipac RLP434A receiver module as described here:
http://www.laipac.com/Downloads/Easy/TLPRLP434A.pdf

I can get data on the digital output pin (#2), but I was hoping to also use the linear/analog output pin (#3) as a RSSI. I have
asked Laipac via e-mail, and even though they reply to my messages, I never get technical answers, so I'm hoping to find someone
here who knows how to use it. Here goes:

What are the electrical output characteristics of the Linear Output (pin #3)? Voltage? Impedance?
What is the expected behaviour of pin #3 w.r.t. signal strength?

Thanks,
Gavin

2584. Re: Antenna Tuning Unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 06:55:51 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E8D2C8C.963E8C37@bellatlantic.net>
Source record: 36387

JGBOYLES wrote:
>
> >use a phase detector circuit.
> >Voltage and current will be in phase when the transmitter sees
> >a purely resistive load. There's a good description of the
> >circuit at
> >http://www.tpub.com/neets/book12/51c.htm
>
> That was a good description of the Foster Seely discriminator. Do you use the
> circuit exactly as shown in the article as a phase detector when adjusting your
> tuner? That circuit has only one input and output. As I understand the
> circuit, you get an output when the input frequency differs from the center
> frequency of the discriminator. It will demodulate FM at the frequency it is
> tuned.
> For this circuit to work as a phase detector wouldn't you have to split the
> input into 2 sections and apply the 2 signals you wish to compare phases. Then
> the output would be zero at resonance, one polarity with the current leading,
> the opposite polarity current lagging. Or am I all wet?
> 73 Gary N4AST

Answered via Email. I'll post a briefer answer here.
Essentially the circuit operation is the same, but
the primary is the center conductor of coax passing
through the center of a torroid around which L2 is wound.
The input is split via C8 which is connected to (and senses the
voltage on) the feed line, and L2 which senses the current and
converts it to a voltage. The secondary circuit is arranged
to provide DC, not AF out, by eliminating R1, R2 and C5, and
grounding the junction of L3, R3 and R4, and removing the ground
from the bottom of C4. Output is taken from the junctions of
CR1-R3 and CR2-R4 into a centering 50ua meter. With the exception
of C8, all the stuff to the left of L2 is not part of the circuit
I use.

2585. LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 07:49:20 UTC
From: Graeme Zimmer <zim123_NO_SPAM@bigpond.com>
Message-ID: <Kxaja.6637$1s1.80209@newsfeeds.bigpond.com>
Source record: 36388
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Hi Folks,

Some of you might be interested in my little LCD Oscilloscope project.

It uses a 256x128 graphics LCD driven by a PIC18C252 processor

details at http://www.users.bigpond.com/zim123/Graphic/default.html

regards .... Zim VK3GJZ

2586. Re: Driving SBL-1 in Balanced modulator...LO purity??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 07:59:28 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <AXaja.44872$ja4.2774809@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36389

Thanks Richard; that is something that I wasn't aware of.

Pete

Richard Karlquist <richard@karlquist.removethis.com> wrote in message
news:5CNia.70679$Zo.16528@sccrnsc03...
>
> "John Moriarity" <k6qq@hdo.net> wrote in message
> news:v8l313skf35r98@corp.supernews.com...
> > > ... You will find that the mixer
> > > works best if filter element nearest the mixer is a series
> > > inductor, rather than the more common shunt capacitor.
> > > A little known fact.
> >
> > An explanation, please?
> >
> > 73, John - K6QQ
>
> It has to do with the termination of the harmonics. A choke
> output filter (recommended) terminates the harmonics in
> an open circuit; ie it behaves as a current source. A capacitor
> output filter terminates the harmonics in a short circuit; ie it behaves
> as a voltage source. In the former case, the filter is forcing
> a sine wave current through the diodes. The time varying impedance
> of the diode is proportional to the logarithm of sin wt, which is
> a well behaved function that approximates an ideal switch. In the
> latter case, the filter is trying to force a sine wave voltage across
> the diodes. In this case, the time varying impedance of the
> diode is proportional to the anti-logarithm of sin wt. This is
> NOT a well behaved function and it does NOT approximate an
> ideal switch very well. Hope that helps. It's a little hard to
> explain, but if you look at the voltages and currents in a real
> circuit, it is really obvious which version works better.
>
> Rick N6RK
>
>

2587. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 09:49:28 UTC
From: Trevor Wilson <trevor@rageaudio.com.au>
Message-ID: <3e8d552d$0$9633$afc38c87@news.optusnet.com.au>
Source record: 36390
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

"Graeme Zimmer" <zim123_NO_SPAM@bigpond.com> wrote in message
news:Kxaja.6637$1s1.80209@newsfeeds.bigpond.com...
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html
>
>
> regards ..... Zim VK3GJZ
>

**Outstanding! It may be worth your while contacting Silicon Chip. They may
pay you for your efforts.

--
Trevor Wilson
www.rageaudio.com.au

2588. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 10:05:39 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuiah91o.fld@barrow.com>
Source record: 36391

crabtreejr@aol.com (John Crabtree) wrote:
>The reference to the paper by Caruthers is:
>R.S. Caruthers, Copper Oxide Modulators in Carrier Telephone Systems, Bell
>System Technical Journal, pp 315-337, April 1939
>
>He described 5 configurations of diode modulator, including the ring. He
>stated that by about 1931 copper oxide rectifiers began to be promising as
>serious competitiors to vacuum tubes in modulators. He went on:
>"Since 1931 continued improvements in copper oxide regulators have rapidly
>increased their field of application until they are now employed in practically
>all of the latest types of carrier telephone systems.

Copper oxide "varisters" were used in the channel banks and for
Group and Supergroup modulators and demodulators use in L
carrier systems designed in the 1930's. That was also true with
K, J, and I think with N carrier too. C carrier was originally
designed with tube type modulators, and later was equipped with
varisters, but I'm not sure about the dates when that happened.

I'm not sure when the earliest of these designs was actually
done, and it may well have been in the late 1920's. By 1939 it
was an _understatement_ to say they were employed in
"practically" all of the lastest carrier systems!

The 1953 Green Brain ("Principles of Electricty applied to
Telephone and Telegraph Work") shows an example diagram for K
carrier that has ring modulators in the channel bank section and
a lattice bridge in the group section. (Note that the channel
banks for K carrier were common to K, L, J and N carrier.)

Interestingly enough, one of the major problems with L carrier
systems that were still in use up through the 1970's was the
increasing failure rate of those varistors. There were tubes in
some of those systems that lasted longer than the varistors!

>The copper oxide rectifier was invented in ca. 1926.
>
>73 John KC0GGH
>
>
>Richard Karlquist richard@karlquist.removethis.com on
> 4/3/03 wrote:
>>Message-id: <PyZia.314391$L1.88735@sccrnsc02>
>>
>>A well known early reference is Caruthers paper in the
>>Bell System Technical Journal in 1939, the title is

>>something like "Copper oxide rectifiers in telephone
>>modulators". Also, the Rad Lab series has a whole
>>volume on mixers. Not sure if any of these are ring
>>topology though.
>>
>>Rick N6RK
>>
>>"Tom Bruhns" <k7itm@aol.com> wrote in message
>>news:3200347.0304022314.32736f97@posting.google.com...
>>> Hi all,
>>>
>>> What was the earliest that the diode ring double-balanced mixer
>>> occured? I have a reference to it in the early 1950's and wonder if
>>> anyone knows of it before that. My reference points to a few earlier
>>> uses of a diode bridge DBM, as opposed to a diode ring, but so far
>>> it's the earliest I've seen of the ring.
>>>
>>> (BTW, thanks to Rick Karlquist for his note in another thread about
>>> the best way to drive modern diode DBM LO ports.)
>>>
>>> Cheers,
>>> Tom
>
>
>John Crabtree

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2589. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 12:14:18 UTC
From: Rob <aj_benjamin@hotmail.com>
Message-ID: <3e8d76a1$0$20150@echo-01.iinet.net.au>
Source record: 36392
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Great stuff Graeme, with that lcd it would be nice to add a bit more hardware, a serial interface, using the LCD / buttons or excell to create the data and you would have a neat little arbitrary wave generator as well.

I'm looking forward to seeing the PIC FFT code when you get it on your site.

As someone else said, it's good to see some electronics here - more stuff like this may save the group (aus.electronics) from going to crap, which seems to be the aim of a couple of irritants....

regards
rob

2590. Re: (OT) Anyone out ther use HotBot?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 12:18:56 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ec69YNHwgXj+EAbI@ifwtech.co.uk>
Source record: 36393

Sylvan Butler wrote:
>On Wed, 2 Apr 2003 15:49:21 +0100, Ian White, G3SEK
><G3SEK@ifwtech.co.uk> wrote:
>> For complete
>> control over what to include *and* exclude at the same time, try:
>>
>> Web - http://www.google.com/advanced_search
>
>Of course, you can put all those fields on one line and I do it
>every day. :)

Now *that* is "advanced"!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2591. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 14:41:10 UTC
From: Alex Gibson <alxx@ihug.com.au>
Message-ID: <b6k5ft$8pp$1@lust.ihug.co.nz>
Source record: 36394
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

"Graeme Zimmer" <zim123_NO_SPAM@bigpond.com> wrote in message
news:Kxaja.6637$1s1.80209@newsfeeds.bigpond.com...
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html
>
>
> regards ..... Zim VK3GJZ
>

That is a great project!!

Thanks..

Have a good weekend.

Just had a quick browse thru your webpages.

One area / projects I'm interested in, is digital recievers using either
cplds or fpga.
One of the smaller xilinx virtex fpga's is better suited as they have
internal pll.

Not sure where to start.

If anyone is after a good free book(online version) on dsp
http://www.dspguide.com/

Alex

2592. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 15:46:14 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <aNhja.366127$sf5.696220@rwcrnsc52.ops.asp.att.net>
Source record: 36395
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Looks Good Zim
Bill Higdon
Graeme Zimmer wrote:
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html
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>
> regards .... Zim VK3GJZ
>
>

2593. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 16:05:40 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E8DAF10.6282D391@ieee.org>
Source record: 36396

Floyd Davidson wrote:

> crabtreejr@aol.com (John Crabtree) wrote:
>

snipped text

> Copper oxide "varisters" were used in the channel banks and for
> Group and Supergroup modulators and demodulators use in L
> carrier systems designed in the 1930's. That was also true with
> K, J, and I think with N carrier too. C carrier was originally
> designed with tube type modulators, and later was equipped with
> varisters, but I'm not sure about the dates when that happened.
>
> I'm not sure when the earliest of these designs was actually
> done, and it may well have been in the late 1920's. By 1939 it
> was an _understatement_ to say they were employed in
> "practically" all of the lastest carrier systems!
>
> The 1953 Green Brain ("Principles of Electricty applied to
> Telephone and Telegraph Work") shows an example diagram for K
> carrier that has ring modulators in the channel bank section and
> a lattice bridge in the group section. (Note that the channel
> banks for K carrier were common to K, L, J and N carrier.)

N carrier did not use the channel bank It was a double sideband system The ON system used O carrier terminals to get twice the number of channels by using single sideband.

sorry to be picky
Bill K7NOM

>
>
> Interestingly enough, one of the major problems with L carrier
> systems that were still in use up through the 1970's was the
> increasing failure rate of those varistors. There were tubes in
> some of those systems that lasted longer than the varistors!
>
> >The copper oxide rectifier was invented in ca. 1926.
> >
> >73 John KC0GGH
> >
> >
> >Richard Karlquist richard@karlquist.removethis.com on
> > 4/3/03 wrote:

> >>Message-id: <PyZia.314391$L1.88735@sccrnsc02>
> >>
> >>A well known early reference is Caruthers paper in the
> >>Bell System Technical Journal in 1939, the title is
> >>something like "Copper oxide rectifiers in telephone
> >>modulators". Also, the Rad Lab series has a whole
> >>volume on mixers. Not sure if any of these are ring
> >>topology though.
> >>
> >>Rick N6RK
> >>
> >>"Tom Bruhns" <k7itm@aol.com> wrote in message
> >>news:3200347.0304022314.32736f97@posting.google.com...
> >>> Hi all,
> >>>
> >>> What was the earliest that the diode ring double-balanced mixer
> >>> occured? I have a reference to it in the early 1950's and wonder if
> >>> anyone knows of it before that. My reference points to a few earlier
> >>> uses of a diode bridge DBM, as opposed to a diode ring, but so far
> >>> it's the earliest I've seen of the ring.
> >>>
> >>> (BTW, thanks to Rick Karlquist for his note in another thread about
> >>> the best way to drive modern diode DBM LO ports.)
> >>>
> >>> Cheers,
> >>> Tom
> >>
> >>
> >>John Crabtree
> >>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2594. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 17:41:45 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E8DC3D7.6000801@ay.com.au>
Source record: 36297
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Graeme Zimmer wrote:
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html

Very nice, the PSK31 project is interesting too.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Crescent (8% of Full)

2595. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 18:15:12 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87fzoygmdr.fld@barrow.com>
Source record: 36298

Bill Janssen <billj@ieee.org> wrote:
>Floyd Davidson wrote:
>
>> Copper oxide "varisters" were used in the channel banks and for
>> Group and Supergroup modulators and demodulators use in L
>> carrier systems designed in the 1930's. That was also true with
>> K, J, and I think with N carrier too. C carrier was originally
>> designed with tube type modulators, and later was equipped with
>> varisters, but I'm not sure about the dates when that happened.
>>
>> I'm not sure when the earliest of these designs was actually
>> done, and it may well have been in the late 1920's. By 1939 it
>> was an _understatement_ to say they were employed in
>> "practically" all of the lastest carrier systems!
>>
>> The 1953 Green Brain ("Principles of Electricty applied to
>> Telephone and Telegraph Work") shows an example diagram for K
>> carrier that has ring modulators in the channel bank section and
>> a lattice bridge in the group section. (Note that the channel
>> banks for K carrier were common to K, L, J and N carrier.)
>
>N carrier did not use the channel bank It was a double sideband system The ON
>system used O carrier terminals to get twice the number of channels by using single
>sideband.
>
>sorry to be picky
>Bill K7NOM

Hi Bill,

From the descriptions I have of N carrier, I don't see how that
channel bank could be used either; but what I based my statement
on was a specific sentence in the 1953 Green Brain (page 285).
The description of the channel bank for J carrier systems says,
"Finally, a general design and manufacturing economy is obtained
by using this same channel bank for other carrier systems,
including Type K, L, and N."

It is possible that it was used in some weird combination that
is not described (nothing that actually is described varies from
your comment above). Perhaps it is a typo and should not have
included N carrier in the list.

Hmmm... is there an errata sheet available for that edition? :-)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2596. Free Loudspeaker Box Design Software for Psion5mx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-04 21:29:59 UTC
From: Andrew Rimell <andrew-no-spam-.rimell@mail.com>
Message-ID: <3E8DF957.80005@mail.com>
Source record: 36299
Cross-posted to: rec.radio.amateur.homebrew,comp.sys.psion.apps,comp.sys.psion.misc

Speaker Enclosure Design programme V2.0 for Psion 5/5mx

Primarily aimed at sub-woofer box design this program can in fact be used to design any loudspeaker enclosure box.

Use this program to design the following box types:

* Sealed
* Ported
* 4th Order Bandpass
* 6th Order Bandpass

The program comes with a driver database which initially contains 29 different loudspeaker drivers. You can edit this database and add your own drivers as you wish.

This program is free software, there are no time limits or disabled functions.

Please go to
http://www.geocities.com/andrew_and_deborah/Psion/Speaker/speaker.html
and help yourself.

2597. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 00:23:17 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E8E23B3.A9931BD8@ieee.org>
Source record: 36300

Floyd Davidson wrote:
more stuff cut

> >N carrier did not use the channel bank It was a double sideband system The ON
> >system used O carrier terminals to get twice the number of channels by using single
> >sideband.
> >
> >sorry to be picky
> >Bill K7NOM
>
> Hi Bill,
>
> From the descriptions I have of N carrier, I don't see how that
> channel bank could be used either; but what I based my statement
> on was a specific sentence in the 1953 Green Brain (page 285).
> The description of the channel bank for J carrier systems says,
> "Finally, a general design and manufacturing economy is obtained
> by using this same channel bank for other carrier systems,
> including Type K, L, and N."
>
> It is possible that it was used in some weird combination that
> is not described (nothing that actually is described varies from
> your comment above). Perhaps it is a typo and should not have
> included N carrier in the list.
>
> Hmmm... is there an errata sheet available for that edition? :-)
>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

Don't know of an errata sheet.

Maybe that referance to N and A type Channel banks was from the time when
N carrier was being used and the Labs was looking at ways to go single
sideband so as to get more channels on the same systems. It turned out
that they deigned a system to stack four chanel, O carrier, banks to get
more channels.

Bill K7NOM (ex Pac.tel, AT&T and Bellcore)

2598. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 00:50:16 UTC
From: averyfineman@aol.com
Message-ID: <20030404195016.23756.00000022@mb-fj.aol.com>
Source record: 36301

In article <3E8E23B3.A9931BD8@ieee.org>, Bill Janssen <billj@ieee.org> writes:

>Floyd Davidson wrote:
>more stuff cut
>
>> >N carrier did not use the channel bank It was a double sideband system The
>ON
>> >system used O carrier terminals to get twice the number of channels by
>using single
>> >sideband.
>> >
>> >sorry to be picky
>> >Bill K7NOM
>>
>> Hi Bill,
>>
>> From the descriptions I have of N carrier, I don't see how that
>> channel bank could be used either; but what I based my statement
>> on was a specific sentence in the 1953 Green Brain (page 285).
>> The description of the channel bank for J carrier systems says,
>> "Finally, a general design and manufacturing economy is obtained
>> by using this same channel bank for other carrier systems,
>> including Type K, L, and N."
>>
>> It is possible that it was used in some weird combination that
>> is not described (nothing that actually is described varies from
>> your comment above). Perhaps it is a typo and should not have
>> included N carrier in the list.
>>
>> Hmmm... is there an errata sheet available for that edition? :-)
>>
>> --
>> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>> Ukpeagvik (Barrow, Alaska) floyd@barrow.com
>
>Don't know of an errata sheet.
>
>Maybe that referance to N and A type Channel banks was from the time when
>N carrier was being used and the Labs was looking at ways to go single
>sideband so as to get more channels on the same systems. It turned out
>that they deigned a system to stack four chanel, O carrier, banks to get
>more channels.
>
>Bill K7NOM (ex Pac.tel, AT&T and Bellcore)

Out of curiosity, is there a website(s) that detail more of the old telephony carrier equipment?

My only experience with carrier was with military CF-1 and CF-2 bays...long-lived, stable and Very Heavy (for portable) stuff. That was in the early 1950s.

Len Anderson
retired (from regular hours) electronic engineer person

2599. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 01:06:16 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E8E2C0F.977893DE@bellatlantic.net>
Source record: 36302

George Kinzer wrote:
>
> several times, he never keyed the mic to transmit either...
>

Obviously, since the radio existed in two separate time domains,
he inadvertently installed a modern vox circuit in getting it
to run again ...

> --
>
> Those who want to be successful, will find a way,
> those that don't, will find an excuse!

2600. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 01:54:16 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znn5so8n.fld@barrow.com>
Source record: 36303

averyfineman@aol.com (Avery Fineman) wrote:
>Bill Janssen <billj@ieee.org> writes:
>>Floyd Davidson wrote:
>>>
>>> It is possible that it was used in some weird combination that
>>> is not described (nothing that actually is described varies from
>>> your comment above). Perhaps it is a typo and should not have
>>> included N carrier in the list.
>>>
>>> Hmmm... is there an errata sheet available for that edition? :-)
>>>
>>> --
>>> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>>> Ukpeagvik (Barrow, Alaska) floyd@barrow.com
>>
>>Don't know of an errata sheet.

Heck, I didn't know they'd even made a mistake to point out, much less
have an errata sheet! ;-)

>>Maybe that referance to N and A type Channel banks was from the time when
>>N carrier was being used and the Labs was looking at ways to go single
>>sideband so as to get more channels on the same systems. It turned out
>>that they deigned a system to stack four chanel, O carrier, banks to get
>>more channels.
>>
>>Bill K7NOM (ex Pac.tel, AT&T and Bellcore)
^^^^^^^^^^^^^
Ahem, that's a lot of suffering, just to make to that last one.

> Out of curiosity, is there a website(s) that detail more of the
> old telephony carrier equipment?

I don't know of any. That's one reason that when I retired I
went out and found a 1953 copy of "Principles of Electricity..."
We had them at almost every location I'd worked at (with the
White Alice Comm System, Alascom and eventually ATT Alascom)
over the past 30 some years. Just a really neat old reference
book. (WECo built the White Alice System for the USAF, and had
installed much of what existed at that time with the US Army's
Alaska Comm System, both of which eventually became Alascom
which is now AT&T.)

I've just purchased a 1938 edition on eBay (it's in the mail,
but hasn't arrived yet), which should have better information
about those particular system.

> My only experience with carrier was with military CF-1 and
> CF-2 bays...long-lived, stable and Very Heavy (for portable)
> stuff. That was in the early 1950s.

I'm not sure what that would have been. Do you remember who
made it?

I'll have to admit, nothing has ever been as much fun as WECo L
Carrier for me. It was ancient by the time I discovered it in
the late 60's, but even then it was an engineering marvel.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2601. Data neede MC14519, MSM561

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 02:46:33 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0304041846.2f9c3145@posting.google.com>
Source record: 36304

I am trying to troubleshoot an elderly Yaesu FT227R 2 m transceiver,
and need the pinouts for two of the ic's in the display module. They
are Motorola MC14519
and OKI MSM 561 (display driver) Anyone point me in the right
direction - being obselete, they are no longer ibn the manufacturers
online database.
Tnks
de VK3BFA Andrew

2602. 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 05:22:13 UTC
From: GregEMT1@netzero.com
Message-ID: <3e8f6655.34773727@news.earthlink.net>
Source record: 36305

I am trying to get back into CW (I only learned it well enough to pass the test several years ago) and am also trying to get a friend or two to learn it, and would like to set up our HT's (Icom ICw32a's, to be exact) to send and receive cw so we can practice together. I am looking for a simple way to connect keys to the external mic inputs so that we can practice both sending and recieving code across a short distance. Are there any plans for this on the net, or does anyone know of an easy way to do this?
Thanks in advance for any help!!!
Greg
KF6ALC

2603. Re: 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 06:52:35 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <0uts8v8u5384c39dribhn1etumvuccvv6b@4ax.com>
Source record: 36306

On Sat, 05 Apr 2003 05:22:13 GMT, GregEMT1(nospam)@netzero.com
(KF6ALC) wrote:

>I am trying to get back into CW (I only learned it well enough to
>pass the test several years ago) and am also trying to get a friend or
>two to learn it, and would like to set up our HT's (Icom ICw32a's, to
>be exact) to send and receive cw so we can practice together. I am
>looking for a simple way to connect keys to the external mic inputs so
>that we can practice both sending and recieving code across a short
>distance.

There is not much point in trying to key the HT transmitter on and off
for each element, since HTs generally are quite slow to start
transmitting. Trying to receive this kind of transmissions with an FM
receiver with the squelch open would produce some kind of "inverted"
CW, when the receiver noise is heard when there is no transmission,
but the receiver is quiet, when the transmitter is keyed.

One way around this is to key the transmitter in an inverted way. When
the key is down, the transmission is interrupted and the other FM
receiver will hear the band/receiver noise. When the key is released
the transmitter goes on and the FM receiver at the other end will just
get silence from the speaker. At end of the message, the transmitter
has to be turned off.

But as I said, the HT transmitters are usually quite slow to turn on,
so this is practical for only very slow transmissions.

A much better approach is to build an audio oscillator (e.g. using a
555) running at 400-800 Hz, the output is routed through the telegraph
key, it is then filtered and attenuated and feed into the microphone
input. The FM transmitter is constantly on for the whole message
transmission and the audio is only keyed. The FM receiver at the other
end will either hear silence or the audio tone.

If the rig can be configured to generate the European 1750 Hz repeater
opening tone with some key on the keypad, the telegraph key can be
wired in parallel with this key. The 1750 Hz may sound a bit
unpleasant in extended use.

Don't forget to turn off the FM transmitter at the end of your message
so that you will hear the response :-).

Many small HTs will heat quite a lot if the transmitter is on for
extended periods of time. Thus, if long messages or slow speeds are
used, it could be a good idea to run the HT at a low power setting and
at a lower operating voltage than normally.

Paul OH3LWR

2604. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 11:38:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3e8eb3a9.137078829@news.online.no>
Source record: 36307

On 05 Apr 2003 00:50:16 GMT, averyfineman@aol.com (Avery Fineman)
wrote:

> Out of curiosity, is there a website(s) that detail more of the
> old telephony carrier equipment?
>

> Len Anderson
> retired (from regular hours) electronic engineer person

Yes, I've started few weeks ago to put some details on mine, see

http://home.online.no/~la8ak/2t.htm and
http://home.online.no/~la8ak/33b.htm

Some time ago I tried to ask for documents where the product detector
was used first time for demodulating SSB on radio, but never really
got any replies to this, got a lot of answers referring to telephone
carrier systems invented in 1918, and it is perfectly prossible to
build a balanced modulator on 20kHz based on mechanical modulator
Those "ancient" carrier frequency systems were optimized in using few
tubes as possible, but still they filled up a room to cover only 8 or
15 telephone channels. It seems I should have collected more material
from work, and now the only instruments I have to use at work is a
portable PC and a car and we are not supposed to use paper and books,
earlier we had at least a tool-box

73 Jan-Martin
LA8AK
http://home.online.no/~la8ak/index.htm
--
remove ,xnd to reply

2605. Negative impedance amplifier for variable IF bandwidth xtal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 11:38:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3e8eb6bd.137866252@news.online.no>
Source record: 36308

Have put some notes on my site http://home.online.no/~la8ak/89.htm
showing principle how you can reduce the loss resistance in the
crystal and achieve improved selectivity in simple xtal filters. It is
based on principles described by HP (Santa Rosa, California, site),
but as K7ITM Tom Bruhns mentions, it is a technique not interesting
for Agilent any more, since they achieve far better results with
digital circuits. Perhaps an idea to look at for those who still like
to experiment with analogue circuits?

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/index.htm
--
remove ,xnd to reply

2606. Re: LCR Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 11:54:42 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Cxzja.4864$go5.94349@newsfep1-win.server.ntli.net>
Source record: 36309

"john graesser" <graesser@tca.net> wrote in message
news:v8m3e8bsvokf9b@corp.supernews.com...
>
> "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
> news:sMDia.513$R43.96265@newsfep1-win.server.ntli.net...
> > > Anybody ever dealt with the cheap LCR meters versus the older genrad
> > > type bridges? If so, how do they compare? Can you get good accurate
> > > readings on the digital meters? Even on very low readings such as 4 or
> > > 5 picofarads?
> > ========================
> > For your information ,I am using a Thandar - Model TC200 LCR meter with
3
> > 1/2 digit LCD readout ,made by Thandar Electronics -Huntingdon -
> > Cambridge-shire - UK ,its minimum cap range is 0 -200 pF (stated
> uncertainty
> > +/- 1 % + 1 LS digit).
> >
> > The instument 's test condition is 1 kHz and 100 mV.
> >
> > I am happy with the instument ,but even with cap stuck directly into the
> > instument connections (hence without test leads) ,I have to accept it
> that
> > a cap of say 10 pF can not be measured with an uncertainty better than
10
> %.
> >
> > It should also be realised that the capacitance will change with
frequency
> > as can be shown for example when measuring the capacitance with a MFJ
> > antenne analyser while changing the frequency.
> >
> > Frank gm0csz.kn6wh@ntlworld.com
>
> If I am understanding you correctly you are getting better readings than
> the specs promise. If you can get a reading of +-10% on a 10pf test, then
it
> is worlds better than the error of 1 ls digit. That would be +- 9pf, which
> for your test would be +- 90%. Any single digit reading would be totally
> worthless since they already tell you that the ls digit isn't real.
> thanks, John.
> KC5DWD
=========
I should clarify and correct my previous message (see above)
On the above referred LCR meter a nominal 12 pF capacitor shows as 11.2 pF

With the uncertainty being +/- 1% of actual reading plus 1 least
significant digit (as per the manual) the actual capacitance is in between
11.2 +0.1+0.1 = 11.4 pF and 11.2 - 0.1 + 0.1 = 11.2 pF , hence the actual
reading minus 0 and plus 2%.

The early version of the meter I have ,does not include a 'zero' adjustment
to cancel out any measuring
lead capacitance ,but caps (and also resistors and inductors) alternatively
can be stuck directly into the instrument via internal 'blade type spring
connectors'.
I remember the price I paid (in 1987) for this still very frequently used
instrument was GBP 99.- (approx US$ 150.-)

Frank gm0csz.kn6wh@ntlworld.com

2607. Re: 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 14:06:27 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <DpBja.2923$Jc.1571@fed1read02>
Source record: 36310

Why not use audio modulation ?
Just use a code practice oscillator (CPO) with a speaker or use a keyer with a speaker and key the rig and send audio CW. Place the HT mic close to the CPO speaker. Use a clamp to hold the PTT closed.
Identify every 10 minutes in voice or CW.

We conducted a code practice net here in San Diego using this method. Works fine.

Keying an FM transmitter to send CW will send a carrier with no tone and with no BFO in the RX will result in just on off carrier

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"GregEMT1 (nospam) (KF6ALC)" <@netzero.com> wrote in message news:3e8f6655.34773727@news.earthlink.net...
> I am trying to get back into CW (I only learned it well enough to
> pass the test several years ago) and am also trying to get a friend or
> two to learn it, and would like to set up our HT's (Icom ICw32a's, to
> be exact) to send and receive cw so we can practice together. I am
> looking for a simple way to connect keys to the external mic inputs so
> that we can practice both sending and recieving code across a short
> distance. Are there any plans for this on the net, or does anyone
> know of an easy way to do this?
> Thanks in advance for any help!!!
> Greg
> KF6ALC

2608. FS: 200pf doorknob capacitors, new

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 16:13:21 UTC
From: k9sqg@aol.com
Message-ID: <20030405111321.24137.00000362@mb-ck.aol.com>
Source record: 36311

Have some new 200 pf doorknob caps, $5 each plus shipping.

73s,

Evan

2609. Re: 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 16:14:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v8u08tscv9pf92@corp.supernews.com>
Source record: 36312

I did something similar recently. I was giving some traffic practice at a local RACES meeting, and I wanted to send a few CW messages. Since everyone tends to bring their HT's to this meeting, FM MCW seemed like the way to go.

In this case, I wanted a few canned messages. I also wanted to release the transmitter for a few seconds after each BT. I used a mobile rig to do the transmitting (powered off a gel cell), but the same idea would work for an HT.

What I did was to program a PIC to do the work for me. I used a DIP relay to key the transmitter, and used the PIC to generate a 700 Hz square wave tone. A 0.047u cap between the PIC output and the MIC input softened the tone enough and reduced the output to an appropriate level.

For your purposes, I would put some keyer code in the PIC (although if you are using hand keys this could be dirt simple PIC code). This sort of application of the PIC really whacks the parts count compared to trying to do something with discrete logic. All it takes is a 5 volt regulator with the requisite 2 caps, a microprocessor crystal, the keying relay, and the output cap, plus, of course, the PIC. I ran the thing off a 9 volt battery and added a switch and an on/off LED since there's no other way to tell when the battery is being drained.

Unfortunately, I don't have this circuit posted, and never even made up a schematic, the thing is so simple.

..

"GregEMT1 (nospam) (KF6ALC)" <@netzero.com> wrote in message news:3e8f6655.34773727@news.earthlink.net...
> I am trying to get back into CW (I only learned it well enough to
> pass the test several years ago) and am also trying to get a friend or
> two to learn it, and would like to set up our HT's (Icom ICw32a's, to
> be exact) to send and receive cw so we can practice together. I am
> looking for a simple way to connect keys to the external mic inputs so
> that we can practice both sending and recieving code across a short
> distance. Are there any plans for this on the net, or does anyone
> know of an easy way to do this?
> Thanks in advance for any help!!!
> Greg
> KF6ALC

2610. WTB: original manual for Kenwood VFO-230

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 16:25:17 UTC
From: k9sqg@aol.com
Message-ID: <20030405112517.24173.00000347@mb-ck.aol.com>
Source record: 36313

Have a copy but need an original.

Thanks.

Evan

2611. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 18:15:28 UTC
From: averyfineman@aol.com
Message-ID: <20030405131528.23238.00000007@mb-fy.aol.com>
Source record: 36314

In article <87znn5so8n.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net>
writes:

>> Out of curiosity, is there a website(s) that detail more of the
>> old telephony carrier equipment?
>
>I don't know of any. That's one reason that when I retired I
>went out and found a 1953 copy of "Principles of Electricity..."
>We had them at almost every location I'd worked at (with the
>White Alice Comm System, Alascom and eventually ATT Alascom)
>over the past 30 some years. Just a really neat old reference
>book. (WECo built the White Alice System for the USAF, and had
>installed much of what existed at that time with the US Army's
>Alaska Comm System, both of which eventually became Alascom
>which is now AT&T.)
>
>I've just purchased a 1938 edition on eBay (it's in the mail,
>but hasn't arrived yet), which should have better information
>about those particular system.
>
>> My only experience with carrier was with military CF-1 and
>> CF-2 bays...long-lived, stable and Very Heavy (for portable)
>> stuff. That was in the early 1950s.
>
>I'm not sure what that would have been. Do you remember who
>made it?

Western Electric, of course. :-) [good old Chicago...]

CF-1 was a 4 voice channel carrier system with a top frequency
of 12 KHz. CF-2 had four TTY channels and would work from
one voice channel circuit. At ADA in Tokyo those were used
for VHF-UHF backup of landline circuits.

Both were rack-mounted with the racks in transit cases. Sitting
upright they were a bit over 5 1/2 feet tall. Stable as a rock they
were...felt like crystal-controlled but not a single crystal in them.
CF-2s had built-in adjustment-test circuitry for the polar relays
in the TTY loops.

>I'll have to admit, nothing has ever been as much fun as WECo L
>Carrier for me. It was ancient by the time I discovered it in
>the late 60's, but even then it was an engineering marvel.

"Carrier" equipment was the first use of SSB communications
anywhere. It became associated with "commercial bandwidth"

SSB (4 voice-bandwidth channels in 12 KHz total) in the early 1930s, became part and parcel of such pre- and post-WW2 SSB radio circuits worldwide. Single-channel, single-user SSB didn't come into full force until after WW2.

Len Anderson
retired (from regular hours) electronic engineer person

2612. FA: Air Wound Coil - 32 uH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 19:03:05 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <JLFja.89862$0g4.2611749@news2.east.cox.net>
Source record: 36315
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3017201064&ssPageName=ADM
E:B:LC:US:1

Thanks for looking,

Larry Keith
KQ4BY

2613. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 19:41:00 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E8F330D.BA983E80@ieee.org>
Source record: 36316

J M Noeding wrote:

> On 05 Apr 2003 00:50:16 GMT, averyfineman@aol.com (Avery Fineman)
> wrote:
>
> > Out of curiosity, is there a website(s) that detail more of the
> > old telephony carrier equipment?
> >
>
> > Len Anderson
> > retired (from regular hours) electronic engineer person
>
> Yes, I've started few weeks ago to put some details on mine, see
>
> http://home.online.no/~la8ak/2t.htm and
> http://home.online.no/~la8ak/33b.htm
>
> Some time ago I tried to ask for documents where the product detector
> was used first time for demodulating SSB on radio, but never really
> got any replies to this, got a lot of answers referring to telephone
> carrier systems invented in 1918, and it is perfectly prossible to
> build a balanced modulator on 20kHz based on mechanical modulator
> Those "ancient" carrier frequency systems were optimized in using few
> tubes as possible, but still they filled up a room to cover only 8 or
> 15 telephone channels. It seems I should have collected more material
> from work, and now the only instruments I have to use at work is a
> portable PC and a car and we are not supposed to use paper and books,
> earlier we had at least a tool-box
>
> 73 Jan-Martin
> LA8AK
> http://home.online.no/~la8ak/index.htm
> --
> remove ,xnd to reply

The first carrier system I saw was from the 1930's or so and was three
channels in three nine foot relay racks. It used dry cell batteries for
bias.
The tube had round "globe" style envelopes.

Bill K7NOM

2614. Re: 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-05 19:57:40 UTC
From: bjorn890@aol.com57445747
Message-ID: <20030405145740.20333.00000478@mb-fu.aol.com>
Source record: 36317

I have had success with simply using the PPT button as a key.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

2615. FS: TUBES @ very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 00:31:36 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <dyKja.1846$ss.1317@fed1read04>
Source record: 36318
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list of 1000's of receiving, TV and special purpose TUBES at very low prices. Sorry no transmitter output tubes.

2616. T - R relay circuit needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 03:09:13 UTC
From: Susan and Wayne <a123199@attbi.com>
Message-ID: <tTMja.83932$OV.192669@rwcrnsc54>
Source record: 36319

.I have built a 2 meter band Amp and need a transmit/receive relay circuit.
Does any body have such a schematic for a 2-meter relay?
-Thanks,
-Wayne
KB1JQX@attbi.com

2617. Re: Frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 05:44:13 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304052144.42cdfa6@posting.google.com>
Source record: 36320

"Ralph Mowery" <rmowery@ctc.net> wrote in message news:<KEKdnV9H1vulFemjXTWcpQ@ctc.net>...
> > I'm watching the movie Frequency on network tv. You'd think the prop men
> > on the movies would know the difference between a receiver and a
> > transceiver.
> > The ham rig being shown is an old Heath SB301. No way to hook up a
> > microphone
> > to that, it wouldn't have been any more trouble for them to dig up an
> > SB101 now would it?
> >
>
> It is only a movie, Do you really think you can talk on the radio to
> someone who is dead ?
>
> Maybe it takes a receiver instead of a transmitter to do that :-)

What medium do you suppose they use?

(Sorry, I couldn't resist.)

Cheers,
Tom

2618. Antenna matching help for novice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 07:45:31 UTC
From: David Huisman <dhuisman@bigpond.net.au>
Message-ID: <vWQja.1854$Tb6.16845@news-server.bigpond.net.au>
Source record: 36321
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi,

I have some commercial end fed dipole antennas. I trimmed them to length from the supplier trimming chart for 152 MHz.

When I sweep one with the RF sig gen and return loss bridge, I see the resonant dip at 152 MHz but it is only about 8 dB return loss.

If I may a simple dipole from some hook-up wire and sweep it, I get around 20-25 dB return loss.

Would someone mind explaining what is happening, is there a PI match or something required between my sig gen and RG58 Coax to improve the retrun loss.

Also, what is optimal length of coax (is it multiple of 1/2 wavelength or (1/2 wavelength x Vp) ?)

Thanks for any assistance.

2619. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 11:59:17 UTC
From: tronnort@hotmail.com
Message-ID: <7de449f7.0304060359.7895a549@posting.google.com>
Source record: 36322
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

"Graeme Zimmer" <zim123_NO_SPAM@bigpond.com> wrote in message
news:<Kxaja.6637$1s1.80209@newsfeeds.bigpond.com>...
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html
>
>
> regards .... Zim VK3GJZ

Great work Graeme, keep it up.

Regards
Dave :)

2620. news in home page

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 12:29:50 UTC
From: Andrea <mezand@libero.it>
Message-ID: <25Vja.11719$iy5.344833@twister2.libero.it>
Source record: 36323

news in home page.....manual.....datasheet....project ecc ecc

www.qsl.net/iw4cb

2621. Re: First use of diode ring DBM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 13:54:47 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <b6pbj6ati1@hercules.btinternet.com>
Source record: 36324

Hi Tom It may not be exactly what you are thinking of but the early commercial SSB transmitters circa 1925 used Copper-Oxide bridges I believe, but I do not have any circuits. An original was installed at Rugby by Western or AT&T for Voice circuits on about 50khz.
Cheers Alan G3NYK

"Tom Bruhns" <k7itm@aol.com> wrote in message news:3200347.0304022314.32736f97@posting.google.com...
> Hi all,
>
> What was the earliest that the diode ring double-balanced mixer
> occured? I have a reference to it in the early 1950's and wonder if
> anyone knows of it before that. My reference points to a few earlier
> uses of a diode bridge DBM, as opposed to a diode ring, but so far
> it's the earliest I've seen of the ring.
>
> (BTW, thanks to Rick Karlquist for his note in another thread about
> the best way to drive modern diode DBM LO ports.)
>
> Cheers,
> Tom

2622. Re: Antenna matching help for novice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 14:41:25 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <m0Xja.55$8B3.31@news.inreach.com>
Source record: 36325
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc

David:

A center fed dipole is usually a pretty good match for coax (50 or 70 ohm coax). But an end fed dipole requires some kind of matching device because of the higher impedance (several thousand ohms) involved.

The antenna you have appears to be intended for end feed so it must have some kind of matching device incorporated into it. I wonder if it has to be adjusted, just as the length has to be adjusted according to the cutting chart. You might look in the instructions for information about adjusting any matching device. If that fails, look at the parts near the feed point for anything that looks adjustable.

If this is a mobile type antenna, the matching device could be a screwdriver adjustable capacitor inside the base of the antenna. If it is a base station antenna, it could be a capacitor or maybe a sliding section of transmission line to make the match adjustable.

Good luck,

Roger K6XQ

2623. Re: Antenna matching help for novice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 16:27:09 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v90lbk85ijbj6b@corp.supernews.com>
Source record: 36326
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc

As Roger pointed out, an end fed dipole will have quite a high impedance. This has another effect as well. If there is any coax between your bridge and the antenna, there will be significant loss in the coax at 152 MHz, and that loss will be exaggerated if there is a mismatch between the antenna and the feedline.

In any situation, the "ideal" feedline length is zero, since this will result in minimum loss. If your antenna is mismatched, some feedline lengths can hide the mismatch at the transmitter, but the exaggerated feedline losses will still be there. This masking of the antenna can help transfer power from the transmitter into the feedline, but may not help the end result. Certainly, when everything is matched you have the best situation, and in this case, increasing feedline length increases the losses, but changes nothing else.

When things are not matched, then different feedline lengths will give you different measurements, but in most cases, those measurements will be somewhat misleading since the feedline losses can get quite astonishingly high, and the measurements you get will be correct, or indicate a lower than actual mismatch (and consequently lower than actual feedline losses), depending on the length.

..

"David Huisman" <dhuisman@bigpond.net.au> wrote in message
news:vWQja.1854$Tb6.16845@news-server.bigpond.net.au...
> Hi,
>
> I have some commercial end fed dipole antennas. I trimmed them to length
> from the supplier trimming chart for 152 MHz.
>
> When I sweep one with the RF sig gen and return loss bridge, I see the
> resonant dip at 152 MHz but it is only about 8 dB return loss.
>
> If I may a simple dipole from some hook-up wire and sweep it, I get around
> 20-25 dB return loss.
>
> Would someone mind explaining what is happening, is there a PI match or
> something required between my sig gen and RG58 Coax to improve the retrun
> loss.
>
> Also, what is optimal length of coax (is it multiple of 1/2 wavelength or
> (1/2 wavelength x Vp) ?)
>

> Thanks for any assistance.
>
>
>

2624. TS430S REPAIR HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 20:32:34 UTC
From: Vince <vcl@sympatico.ca>
Message-ID: <t90ka.341$d55.81089@news20.bellglobal.com>
Source record: 36327

hi all, i need some help. i have a kenwood ts430s and my problem is that. i will turn on the radio i will use it for a bit it works fine. but if i leave it on for a while the rig will stay on but the display will go off and it will not tx or rx but if i turn it off and back on it will work again also sometimes the display will blink (off and on) and the rig will change the band and frequency. i need help as to what to do to repair it can anyone help me.....thank you

Vince ve3elb
==========
Email: ve3elb@rac.ca
Visit My Webpages @ :
www.qsl.net/ve3elb
http://www3.sympatico.ca/vcl

2625. For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 20:38:03 UTC
From: Michael Feldt <feldtm@iquest.net>
Message-ID: <w40ka.274$764.14500@news.iquest.net>
Source record: 36328
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm selling it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester where 5000 umhos is the miniman acceptable level. Tube has no shorts. $25 which includes shipping in the contanintal USA.

Michael Feldt
feldtm@iquest.net
www.indianaradios.com

2626. SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 20:38:53 UTC
From: hexter@blazenet.net
Message-ID: <v9142th77qg7ce@corp.supernews.com>
Source record: 36329

Hello fellow 8 bit ancient computer buffs,

I have been using the basic SDK-85 unit for 25 years, and have built several similar units from scratch. I have made many adjustments to the original somewhat flakey and unstable monitor software.

If you use the TTY feature, here is what I have to offer,

A direct plug in 8755A (should work in place of 8355) that is running a baud rate of 1200 8 N 2, instead of the strange 110, 7 M 2 that was supplied from Intel. I have deleted the chiclet keypad support software completely, giving you nearly 1 kilobyte of free 'FF' space to play in. I have fixed the weird stack problems also.

I could probably supply the patches, typed on paper, a 2716 eprom, or maybe an 8755a eprom. Which would you desire? Any interest?

KD3SH

2627. Re: Saturable Core Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 20:47:17 UTC
From: Chris Trask <christrask@earthlink.net>
Message-ID: <pn0ka.12142$4P1.1045500@newsread2.prod.itd.earthlink.net>
Source record: 36330

>
> I have a magazine article that I tore out of 'Applied Mircrowave &
> Wireless' magazine. Unfortunately, the even numbered pages, where
> the date would be, is all advertisements, so no date! Also,
> unfortunately, the last page of the article is lost, which would
> include the conclusions and bibliography.
>

Jim,
I wrote that article. It was in the Sep/Oct 1997 issue.

You can find references to virtually every article or paper published on
transductors on my web page at:

http://www.home.earthlink.net/~christrask/trnsdctr.html

I can provide you with a scanned copy of the missing last page if you like.

Chris

,----------------------. High Performance Mixers and
/ What's all this \ Amplifiers for RF Communications
/ extinct stuff, anyhow? /
\ _______,--------------' Chris Trask / N7ZWY
_ |/ Principal Engineer
oo\ Sonoran Radio Research
(__)\ _ P.O. Box 25240
\ \ .' `. Tempe, Arizona 85285-5240
\ \ / \
\ '" \ IEEE Member #40274515
. ( ) \
'-|)__| :. \ Email: christrask@earthlink.net
| | | | \ '. http://www.home.earthlink.net/~christrask
c__; c__; '-..'>.__

Graphics by Loek Frederiks

2628. Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 22:46:41 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0304061446.2a6cbdac@posting.google.com>
Source record: 36331
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

In the "old days" when power supply diodes were used in series for higher voltage capacity, resistors and capacitors were used across each diode to equalize voltages. I've heard that this is no longer necessary, because modern diodes have controlled reverse breakdown a-la Zeners. So, is equalizing needed these days or not? If not, does that cover all typical late-model diodes that might turn up surplus (normal 1N4xxx, fast-recovery types, etc)?

Here's hoping it's true!

73,
Mike, KK6GM

2629. Surplus AT power supply turned into HAM PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 23:41:14 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E90BB1A.EED78CA0@osite.com.br>
Source record: 36332

Hi Guys,

As I posted earlier (March/22) on this NG...

I just finished testing the modified power supply I got from
the trash.
I followed the procedures outlined on an article (in
portuguese)
http://www.qrvtotal.hpg.ig.com.br/repetidoras.htm

This mod is quite simple, involving only a few diodes and a
capacitor.

I found that this modified power supply is quite
noisy...Putting some split beads over the power cord
decreased the noise a bit.

The antenna I used however, was far from ideal. A 5m
telephone wire hanging from the 13th floor without any form
of grounding.

I was thinking about putting a 4u7 capacitor in paralell
with the output to reduce the noise. If anyone has another
idea, it will be welcome.

cheers,
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2630. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 23:46:46 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E90BC66.30401@bellsouth.net>
Source record: 36334
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Mike Silva wrote:
> In the "old days" when power supply diodes were used in series for
> higher voltage capacity, resistors and capacitors were used across
> each diode to equalize voltages. I've heard that this is no longer
> necessary, because modern diodes have controlled reverse breakdown
> a-la Zeners. So, is equalizing needed these days or not? If not,
> does that cover all typical late-model diodes that might turn up
> surplus (normal 1N4xxx, fast-recovery types, etc)?
>
> Here's hoping it's true!
>
> 73,
> Mike, KK6GM

I know this was the usual practice when 'top hat' type SI rectifiers
were used. Many years ago I built a linear supply using 1N4007's and
I did parallel each diode with a 470k 1/2 wat resistor and a .001 1000v
disk capacitor. I don't know if this was necessary or not, but the supply
worked just fine. I also used twice as many diodes as necessary (the
transformer
was about 2800-0-2800 and I used 10 diodes in each leg of the fw rectifier).
The filter cap used ten 330uf 450v caps in series.

2631. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-06 23:47:25 UTC
From: hexter@blazenet.net
Message-ID: <v91f4d3ed82j7f@corp.supernews.com>
Source record: 36333
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

In article <20619edc.0304061446.2a6cbdac@posting.google.com>,
snarflemike@yahoo.com says...
>
>In the "old days" when power supply diodes were used in series for
>higher voltage capacity, resistors and capacitors were used across
>each diode to equalize voltages. I've heard that this is no longer
>necessary, because modern diodes have controlled reverse breakdown
>a-la Zeners. So, is equalizing needed these days or not? If not,
>does that cover all typical late-model diodes that might turn up
>surplus (normal 1N4xxx, fast-recovery types, etc)?
>
>Here's hoping it's true!
>
>73,
>Mike, KK6GM

Actually, the equalizing resistors is still a good idea, and still very
much needed with the 1N400X series. All ratings are going to vary a bit,
and vary even more if you mix manufactures of the diodes within your stack.
I have never ran the equalizing capacitors, as they seem to cause problems
more often than curing them, but the resistors are very highly recommended.
Controlled breakdown? You don't want to be anywhere near that part of the
operating curve.

2632. Wallman converter (Cascode amplifier?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 00:57:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3e90caf6.40651450@news.online.no>
Source record: 36336

Some German articles from 1950 refers to the Wallman converter when they are describing 2m converters. The circuits shown are somewhat different from the usual cascodes in the way that full supply voltage is over each valve, instead of the half. It could have some relavance since we know that many triodes will not operate properly with less than 150V, while ECC84=6CW7 will operate properly with as little as 50V supply for each triode.

Suppose Wallman is not a German, the construction may have been desribed elsewhere earlier?

From W0IYH's QST index I found the following early notes:
Tilton "Using the Cascode Amplifier on 50 MHz" p.29 (Mar 49)
Cross "A Cascode Converter for 144 MHz" p.11 (oct 49)
Chambers "The 6BQ7 on 6 and 2" p.46 (cascode amp) (May 52)
Suppose they are the earliest notes, or?

73
Jan-Martin, LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

2633. Re: Surplus AT power supply turned into HAM PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 01:00:46 UTC
From: k9sqg@aol.com
Message-ID: <20030406210046.14450.00000650@mb-fe.aol.com>
Source record: 36335

Paulo,

First you need to determine if the noise is being radiated and/or conducted. The remedy will be different based upon the cause. Linear supplies don't have these types of problems and, if there is ever a failure, it can be very difficult to fault isolate a switching supply and may not be economical to fix it. I've never had a failure with commercial or homebrew linear supplies; switching supplies have had lower reliability in my experience.

73s,

Evan

2634. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 02:03:25 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3E90DC82.50EB9C06@ieee.org>
Source record: 36337
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

gudmundur wrote:

> In article <20619edc.0304061446.2a6cbdac@posting.google.com>,
> snarflemike@yahoo.com says...
> >
> >In the "old days" when power supply diodes were used in series for
> >higher voltage capacity, resistors and capacitors were used across
> >each diode to equalize voltages. I've heard that this is no longer
> >necessary, because modern diodes have controlled reverse breakdown
> >a-la Zeners. So, is equalizing needed these days or not? If not,
> >does that cover all typical late-model diodes that might turn up
> >surplus (normal 1N4xxx, fast-recovery types, etc)?
> >
> >Here's hoping it's true!
> >
> >73,
> >Mike, KK6GM
>
> Actually, the equalizing resistors is still a good idea, and still very
> much needed with the 1N400X series. All ratings are going to vary a bit,
> and vary even more if you mix manufactures of the diodes within your stack.
> I have never ran the equalizing capacitors, as they seem to cause problems
> more often than curing them, but the resistors are very highly recommended.
> Controlled breakdown? You don't want to be anywhere near that part of the
> operating curve.

My approach is/was to assume that at least one diode would go into reverse
breakdown and I added at least one extra diode in the string. I have used that
approach
a few times and have never had a failure.

Good luck.
Bill K7NOM

2635. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 02:31:48 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E90E314.4C2A3CC8@visi.com>
Source record: 36338

gudmundur wrote:

> Hello fellow 8 bit ancient computer buffs,
>
> I have been using the basic SDK-85 unit for 25 years, and have built
> several similar units from scratch. I have made many adjustments to the
> original somewhat flakey and unstable monitor software.
>

gudmundur wrote:

> Hello fellow 8 bit ancient computer buffs,
>
> I have been using the basic SDK-85 unit for 25 years, and have built
> several similar units from scratch. I have made many adjustments to the
> original somewhat flakey and unstable monitor software.

Hi,
I have an SDK-86 and have been looking for a printout of the monitor
program. Do you have same for the SDK-85? Any ideas on how much different

it is from the 86?

Thanks
Bob WB0POQ

2636. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 02:49:02 UTC
From: hexter@blazenet.net
Message-ID: <v91poui6utcua0@corp.supernews.com>
Source record: 36339

In article <3E90E314.4C2A3CC8@visi.com>, wb0poq@visi.com says...
>
>
>
>gudmundur wrote:
>
>> Hello fellow 8 bit ancient computer buffs,
>>
>> I have been using the basic SDK-85 unit for 25 years, and have built
>> several similar units from scratch. I have made many adjustments to the
>> original somewhat flakey and unstable monitor software.
>>
>
>gudmundur wrote:
>
>> Hello fellow 8 bit ancient computer buffs,
>>
>> I have been using the basic SDK-85 unit for 25 years, and have built
>> several similar units from scratch. I have made many adjustments to the
>> original somewhat flakey and unstable monitor software.
>
> Hi,
> I have an SDK-86 and have been looking for a printout of the monitor
>program. Do you have same for the SDK-85? Any ideas on how much different
>
>it is from the 86?
>
>Thanks
>Bob WB0POQ
>
I do have the printed assembly listing of the original SDK-85 source code.
It has a bunch of my hand written notes in the margins. The listing starts
at page 4, and goes to 47. I have maybe 4 additional pages of notes.

Also, I have some source code that I have written to program 2716/2532/
8755A eproms.

B.T.W. The original source code for the monitor came with the SDK-85
package. That was nice of them, because the monitor was a tad buggy.

2637. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 03:25:45 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E90EFB8.4183C1C0@visi.com>
Source record: 36340

gudmundur wrote:

>
> I do have the printed assembly listing of the original SDK-85 source code.
> It has a bunch of my hand written notes in the margins. The listing starts
> at page 4, and goes to 47. I have maybe 4 additional pages of notes.
>

Hi again,
Could I induce you to scan or copy the source code for the monitor and send
it to me? I'd be happy to pay copying/mailing costs.

P.S. I tried replying off list but your address bounces
Bob L.

2638. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 05:12:15 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b6r1bf$qh6$1@freenet9.carleton.ca>
Source record: 36341

Bob Liesenfeld (wb0poq@visi.com) writes:
> gudmundur wrote:
>
>> Hello fellow 8 bit ancient computer buffs,
>>
>> I have been using the basic SDK-85 unit for 25 years, and have built
>> several similar units from scratch. I have made many adjustments to the
>> original somewhat flakey and unstable monitor software.
>>
>
> gudmundur wrote:
>
>> Hello fellow 8 bit ancient computer buffs,
>>
>> I have been using the basic SDK-85 unit for 25 years, and have built
>> several similar units from scratch. I have made many adjustments to the
>> original somewhat flakey and unstable monitor software.
>
> Hi,
> I have an SDK-86 and have been looking for a printout of the monitor
> program. Do you have same for the SDK-85? Any ideas on how much different
>
> it is from the 86?
>
> Thanks
> Bob WB0POQ
>
>
>
There was an 8088 (or perhaps 8086) single board computer with an SDK
prefix. Steve Ciarcia wrote about it in Byte. Could that be what the
SDK-86 is?

Michael VE2BVW

2639. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 07:05:03 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <UpWvVWFfMSk+EAwQ@ifwtech.co.uk>
Source record: 36342
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

gudmundur wrote:
>In article <20619edc.0304061446.2a6cbdac@posting.google.com>,
>snarflemike@yahoo.com says...
>>
>>In the "old days" when power supply diodes were used in series for
>>higher voltage capacity, resistors and capacitors were used across
>>each diode to equalize voltages. I've heard that this is no longer
>>necessary, because modern diodes have controlled reverse breakdown
>>a-la Zeners. So, is equalizing needed these days or not? If not,
>>does that cover all typical late-model diodes that might turn up
>>surplus (normal 1N4xxx, fast-recovery types, etc)?
>>
>>Here's hoping it's true!
>>
>>73,
>>Mike, KK6GM
>
> Actually, the equalizing resistors is still a good idea, and still very
>much needed with the 1N400X series. All ratings are going to vary a bit,
>and vary even more if you mix manufactures of the diodes within your stack.
> I have never ran the equalizing capacitors, as they seem to cause problems
>more often than curing them, but the resistors are very highly recommended.
>Controlled breakdown? You don't want to be anywhere near that part of the
>operating curve.
>

The advice that "equalizing" components are not needed has been in ARRL Handbooks for several years now. A few years ago, someone asked this question to my monthly RadCom column, so I contacted the original author for more details. Also it has been discussed several times on the AMPS mailing-list (amps@contesting.com).

The need for equalizing components is history - literally. It all began because early silicon power rectifiers could easily fail by reverse breakdown, causing a destructive arc across the wafer. The diode would fail short-circuit, so if one diode in a series string were to fail, it would place more inverse voltage across the other diodes and the whole string could 'unzip'. At first these diodes were quite expensive, and it was unusual to find more than 400V PIV, so manufacturers did not build in much extra capability to withstand a mains voltage surge at the wrong part of the cycle. Instead they relied on equalizing Rs and Cs to share the inverse voltage along the whole string.

That has changed, in three major ways:

1. All modern rectifier diodes have an avalanche ("zener-like") reverse breakdown characteristic

2. Peak inverse voltages can be much higher - 1000V is routine (1N4007, 1N5408 etc)

3. They are now "as cheap as chips".

The avalanche breakdown characteristic means that if a 1000V PIV diode does break down, it acts like a "1000V zener" (not a short) so it doesn't stress the other components anything like so much. If it's part of a series string of diodes, the power dissipation during breakdown is limited by the reverse leakage current of the other diodes that have *not* failed, so a reverse avalanche breakdown is usually completely recoverable - you'll never even know that it happened.

All of these factors put together mean that it isn't necessary to use "equalizing" Rs and Cs any more. It's actually cheaper to use more diodes in series, so that in Gudmundur's words you never come anywhere near reverse breakdown. However, Gudmundur is also right to recommend *not* mixing diodes from different sources in a series string. If you care about reliability, then use new, branded diodes straight off the bandolier from the factory. These will be as close as possible to identical in reverse leakage, so they will be self-equalizing without any outside help.

One final point is that so-called "equalizing" components can cause more trouble than they're worth. If they are not rated to withstand more voltage than the diodes themselves, and if they don't remain closely matched in value through the entire lifetime of the equipment, they can have the opposite effect to what they're intended for! These days, it's actually cheaper to use additional diodes.

That's why the modern approach is not to use equalizing components. In "postmodern" power supplies, capacitors across diodes are coming back, but as part of an R-C snubber network to reduce spikes conducted back into the mains... which is a quite different motivation.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2640. Re: 2 Meter HT CW???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 10:56:06 UTC
From: Steven - VE1SLL <oasisin@nbnet.nb.ca>
Message-ID: <aPcka.2388$UA6.278555@ursa-nb00s0.nbnet.nb.ca>
Source record: 36343

MFJ has a device for this. A few friends and myself are looking at them for the same reason. It is the MFJ-552

"GregEMT1 (nospam) (KF6ALC)" <@netzero.com> wrote in message news:3e8f6655.34773727@news.earthlink.net...
> I am trying to get back into CW (I only learned it well enough to
> pass the test several years ago) and am also trying to get a friend or
> two to learn it, and would like to set up our HT's (Icom ICw32a's, to
> be exact) to send and receive cw so we can practice together. I am
> looking for a simple way to connect keys to the external mic inputs so
> that we can practice both sending and recieving code across a short
> distance. Are there any plans for this on the net, or does anyone
> know of an easy way to do this?
> Thanks in advance for any help!!!
> Greg
> KF6ALC

2641. Re: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 12:45:09 UTC
From: David Milne <dmmilne@ozemail.com.au>
Message-ID: <3E9172D5.9EEE08A6@ozemail.com.au>
Source record: 36344
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Graeme Zimmer wrote:
>
> Hi Folks,
>
> Some of you might be interested in my little LCD Oscilloscope project.
>
> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>
> details at http://www.users.bigpond.com/zim123/Graphic/default.html
>
> regards .... Zim VK3GJZ

Hi Graeme, pretty cool project. Whatcha been doing recently?

--

Regards
David Milne

2642. Re: TS430S REPAIR HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 15:26:39 UTC
From: Skipp <soaponaropeanotheremailaddress@yahoo.com>
Message-ID: <b6s5bfmfu1@woodrow.ucdavis.edu>
Source record: 36345

I would buy some caig labs progold or deoxite and carefully clean each of
the wire harness plug jack assemblies you can easily reach after blowing
the radio out with modest compressed air.

It might also be time to replace the backup battery...

cheers
skipp
http://sonic.ucdavis.edu

: Vince <vcl@sympatico.ca> wrote:
: hi all, i need some help. i have a kenwood ts430s and my problem is that. i
: will turn on the radio i will use it for a bit it works fine. but if i
: leave it on for a while the rig will stay on but the display will go off and
: it will not tx or rx but if i turn it off and back on it will work again
: also sometimes the display will blink (off and on) and the rig will change
: the band and frequency. i need help as to what to do to repair it can anyone
: help me.....thank you

: Vince ve3elb
: ======================
: Email: ve3elb@rac.ca
: Visit My Webpages @ :
: www.qsl.net/ve3elb
: http://www3.sympatico.ca/vcl

2643. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 16:26:17 UTC
From: kludge@panix.com
Message-ID: <b6s8r9$96p$1@panix2.panix.com>
Source record: 36346
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Ian White, G3SEK <g3sek@ifwtech.co.uk> wrote:
>
>All of these factors put together mean that it isn't necessary to use
>"equalizing" Rs and Cs any more. It's actually cheaper to use more
>diodes in series, so that in Gudmundur's words you never come anywhere
>near reverse breakdown. However, Gudmundur is also right to recommend
>*not* mixing diodes from different sources in a series string. If you
>care about reliability, then use new, branded diodes straight off the
>bandolier from the factory. These will be as close as possible to
>identical in reverse leakage, so they will be self-equalizing without
>any outside help.

This is absolutely true, but don't forget to add NE-2 lamps with series
resistors across each diode. The actual transient suppression you get is
minimal, but it sure helps find the problem when a diode goes open.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2644. Re: Antenna matching help for novice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 17:23:11 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304070923.e62076a@posting.google.com>
Source record: 36247
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"David Huisman" <dhuisman@bigpond.net.au> wrote in message
news:<vWQja.1854$Tb6.16845@news-server.bigpond.net.au>...
> Hi,
>
> I have some commercial end fed dipole antennas. I trimmed them to length
> from the supplier trimming chart for 152 MHz.

(If it's end fed, is it a dipole??)
>
> When I sweep one with the RF sig gen and return loss bridge, I see the
> resonant dip at 152 MHz but it is only about 8 dB return loss.
>
> If I may a simple dipole from some hook-up wire and sweep it, I get around
> 20-25 dB return loss.
>
> Would someone mind explaining what is happening, is there a PI match or
> something required between my sig gen and RG58 Coax to improve the retrun
> loss.

Certainly I would not expect the same feedpoint impedance for an
end-fed half wave as for a center-fed half wave. Also, the end-fed
MUST be fed "agains" something. Whatever current you have in the
antenna must have a return path. Typically, it would be a ground
plane, but it might be another half-wave: a center fed full wave
doublet. In fact, with an ideal infinite ground plane, the feedpoint
impedance will be exactly half that of a symmetrical doublet in
freespace. I assume you know that the feedpoint impedance of a full
wave doublet is rather high (and quite dependent on wire diameter).
Expect to have some sort of matching device at the antenna to get a
decent match to coax, or else provide a matching network at the other
end of the line.
>
> Also, what is optimal length of coax (is it multiple of 1/2 wavelength or
> (1/2 wavelength x Vp) ?)

It depends on the mismatch at the antenna, what the line impedance is,
and what sort of network you have to work with for matching at the
other end of the line. If the feedpoint of the antenna is, say, 500
ohms resistive, then 50 ohm line can transform that to 5 ohms or to
500 ohms (actually a bit more than 5 or less than 500 because of loss
in the line), or something with the same SWR (return loss magnitude)
but with reactance. _IF_ you are operating at a fixed frequency, you
might find a line length that makes matching relatively easy. For
example, if you had that 500 ohm resistive load and 75 ohm coax, you

could adjust the length to n*180+27 electrical degrees and get a match to 50 ohms with a simple series inductance of about 140nH...or you could adjust the length to n*180+153 degrees and get a match with about 8pF series capacitance. But if your line is several wavelengths long and you want it to operate over a range of frequencies, things will be far easier if you match at the antenna end, because the impedance seen at the other end as you change frequency changes rapidly if the antenna end is mismatched. Also, line loss is higher for a mismatched line than for a matched line, and that can be a problem, especially for small (high-loss) lines run some distance.

(You can use any of a number of programs to work out numbers like I did above; I prefer the visulization I get from a Smith chart program, and you can even use just a paper Smith chart. But some people prefer to just use a numerical calculation program. In any event, it takes only a couple minutes to work things like that out, well worth the time saved mucking around with coils and capacitors trying to get something working by luck and experimentation.)

Cheers,
Tom

2645. Re: Wallman converter (Cascode amplifier?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 17:25:01 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000057.0200bd16@btinternet.com>
Source record: 36248

Hi,

> Some German articles from 1950 refers to the Wallman converter when
> they are describing 2m converters. The circuits shown are somewhat
> different from the usual cascodes in the way that full supply voltage
> is over each valve, instead of the half. It could have some relavance
> since we know that many triodes will not operate properly with less
> than 150V, while ECC84=6CW7 will operate properly with as little as
> 50V supply for each triode.
>
> Suppose Wallman is not a German, the construction may have been
> desribed elsewhere earlier?
>
> From W0IYH's QST index I found the following early notes:
> Tilton "Using the Cascode Amplifier on 50 MHz" p.29 (Mar 49)
> Cross "A Cascode Converter for 144 MHz" p.11 (oct 49)
> Chambers "The 6BQ7 on 6 and 2" p.46 (cascode amp) (May 52)
> Suppose they are the earliest notes, or?

The MIT Rad Lab Series Vol. 18, "Vacuum Tube Amplifiers" (dated 1946), was penned by Valley and Wallman. On page 440 there is a description of the standard cascode circuit but nothing, as far as I can see, on the topology you mention.

Cheers - Joe

2646. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 20:04:52 UTC
From: hexter@blazenet.net
Message-ID: <v93mf4lr84g12a@corp.supernews.com>
Source record: 36249

In article <b6r1bf$qh6$1@freenet9.carleton.ca>, et472@FreeNet.Carleton.CA'
says...
>
>Bob Liesenfeld (wb0poq@visi.com) writes:
>> gudmundur wrote:
>>
>>> Hello fellow 8 bit ancient computer buffs,
>>>
>>> I have been using the basic SDK-85 unit for 25 years, and have built
>>> several similar units from scratch. I have made many adjustments to the
>>> original somewhat flakey and unstable monitor software.
>>>
>>
>> gudmundur wrote:
>>
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>>>
>>> I have been using the basic SDK-85 unit for 25 years, and have built
>>> several similar units from scratch. I have made many adjustments to the
>>> original somewhat flakey and unstable monitor software.
>>
>> Hi,
>> I have an SDK-86 and have been looking for a printout of the monitor
>> program. Do you have same for the SDK-85? Any ideas on how much different
>>
>> it is from the 86?
>>
>> Thanks
>> Bob WB0POQ
>>
>>
>>
>There was an 8088 (or perhaps 8086) single board computer with an SDK
>prefix. Steve Ciarcia wrote about it in Byte. Could that be what the
>SDK-86 is?
>
> Michael VE2BVW
>
Yes, there was an SDK-86, as well as the 8 bit SDK-85 which I have.
Often I see these come up on ebay as 'antique computers'.

2647. SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 22:11:20 UTC
From: KB9LZB <7210372@127.0.0.1>
Message-ID: <3e91f788_2@corp-news.newsgroups.com>
Source record: 36250

The annual SETI League SETICon03 will be meeting April 25 - April 27 near the Princeton/Trenton NJ area.

The leaders, Dr Al Katz and Dr. H. Paul Shuch are leaders in the area of Microwave communications.

I attended last year and loved the homebrew microwave hardware discussions...

http://www.setileague.org/seticon/prog03.htm

2648. Re: Wallman converter (Cascode amplifier?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-07 22:20:46 UTC
From: la8ak.xnd@online.no
Message-ID: <3e91c912.105712460@news.online.no>
Source record: 36251

On Mon, 07 Apr 2003 18:25:01 +0100, Joe McElvenney
<ximac@btinternet.com> wrote:

>Hi,
>
>> Some German articles from 1950 refers to the Wallman converter when
>> they are describing 2m converters. The circuits shown are somewhat
>> different from the usual cascodes in the way that full supply voltage
>> is over each valve, instead of the half. It could have some relavance
>> since we know that many triodes will not operate properly with less
>> than 150V, while ECC84=6CW7 will operate properly with as little as
>> 50V supply for each triode.
>>
>> Suppose Wallman is not a German, the construction may have been
>> desribed elsewhere earlier?
>>
>> From W0IYH's QST index I found the following early notes:
>> Tilton "Using the Cascode Amplifier on 50 MHz" p.29 (Mar 49)
>> Cross "A Cascode Converter for 144 MHz" p.11 (oct 49)
>> Chambers "The 6BQ7 on 6 and 2" p.46 (cascode amp) (May 52)
>> Suppose they are the earliest notes, or?
>
>
> The MIT Rad Lab Series Vol. 18, "Vacuum Tube Amplifiers" (dated
>1946), was penned by Valley and Wallman. On page 440 there is a
>description of the standard cascode circuit but nothing, as far as I
>can see, on the topology you mention.
>
>
> Cheers - Joe
>
so it is likely that the amplifier is called cascode amplifier in US,
and "Wallman stage" in Europe in early 50's.... while European
articles around 1954 mentioned the 'cascode'

73, Jan-Martin, LA8AK
http://home.online.no/~la8ak/
--
remove ,xnd to reply

2649. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 00:04:24 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0304071604.52be1a73@posting.google.com>
Source record: 36252
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<UpWvVWFfMSk+EAwQ@ifwtech.co.uk>...

<....>
>
> The advice that "equalizing" components are not needed has been in ARRL
> Handbooks for several years now.

On closer examination I see that equalizing was recommended last in
the 1994 Handbook, while it is no longer recommended starting in 1995.

Thanks for the great information. I found the comment about the
equalizing resistors changing over time and making things worse rather
than better especially interesting!

73,
Mike, KK6GM

2650. Re: Wanted: Service/Operation Manual for Boonton 42B

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 06:24:39 UTC
From: Hubie <a@aol.com>
Message-ID: <01c2fdb8$08db6140$1001c4d8@micron>
Source record: 36253

Hi Norm:

You might try Agilent. I have an old Boonton Q meter and Agilent (then HP)
was able to supply the manuals on microfiche. Good luck.

Hubie

Norm VE3CZI <ve3czi@arrl.net> wrote in article
<RPNga.40200$q26.2238286@read1.cgocable.net>...
> Am looking for a copy of a Service/Operation Manual for the Boonton 42B
RF
> MilliVoltmeter.
> Please advise cost or an alternative location to purchase
> Not much luck on "Google"..so have to resort to the NG !
> >> Norm VE3CZI
>
>
>
>

2651. Cathode follower for random wire antenna. [RX]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 06:42:40 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b6tqtj$8qook$1@ID-150848.news.dfncis.de>
Source record: 36254

Instead of using a balun/unun and coax with a random wire, can you feed the random wire to a valved cathode follower circuit and match your coax line this way?

2652. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 07:23:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v94u8g2b82u28b@corp.supernews.com>
Source record: 36255

Bart wrote:
>
> but what if ETI doesn't use microwave?

Worse yet, what if they're all just listening, too?

Roy Lewallen, W7EL

2653. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 07:58:08 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e927f78.3316168@news.freeserve.net>
Source record: 36256

On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Bart wrote:
>>
>> but what if ETI doesn't use microwave?
>
>Worse yet, what if they're all just listening, too?
>
If you were an Intelligent being, somewhere out there, looking for
E.T. Intelligence and you found signals from Earth, would you continue
listening?. If you did then it changes the meaning of Intelligence.

2654. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 08:59:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v953s2mc3lda7e@corp.supernews.com>
Source record: 36257

Mike W wrote:
> On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>Bart wrote:
>>
>>>but what if ETI doesn't use microwave?
>>
>>Worse yet, what if they're all just listening, too?
>>
>
> If you were an Intelligent being, somewhere out there, looking for
> E.T. Intelligence and you found signals from Earth, would you continue
> listening?. If you did then it changes the meaning of Intelligence.

Just think. Expanding from the Earth at the speed of light is an expanding sphere of television waves. And at the very leading edge are Howdy Doody and the McCarthy hearings. Not to say it's all that better farther inside the sphere. . .

Roy Lewallen, W7EL

2655. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 11:19:37 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <C6yka.6745$gC.5756@fe03.atl2.webusenet.com>
Source record: 36258

Just wait till "Gilligan's Island" and "The Brady Bunch" get there.

--
73,
Chuck
KE4ETH
USA-NA

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v953s2mc3lda7e@corp.supernews.com...
> Mike W wrote:
> > On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
> > wrote:
> >
> >
> >>Bart wrote:
> >>
> >>>but what if ETI doesn't use microwave?
> >>
> >>Worse yet, what if they're all just listening, too?
> >>
> >
> > If you were an Intelligent being, somewhere out there, looking for
> > E.T. Intelligence and you found signals from Earth, would you continue
> > listening?. If you did then it changes the meaning of Intelligence.
>
> Just think. Expanding from the Earth at the speed of light is an
> expanding sphere of television waves. And at the very leading edge are
> Howdy Doody and the McCarthy hearings. Not to say it's all that better
> farther inside the sphere. . .
>
> Roy Lewallen, W7EL
>

2656. Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 13:05:42 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnb95i96.a7a.eikelan@ID-77364.user.dfncis.de>
Source record: 36260

Hi y'all:

Has anybody experience with quieting the RFI of an Allen Bradley
Variable Frequency Drive for an air conditioning motor?
The unit adjusts the speed of the motor by varying the frequency
from 40Hz to 60Hz while keeping the voltages at 3 x 400VAC.
The electronic unit resides in a metal cabinet but the wires to the
motor are about 4 meters long and not shielded. The RFI is strong
from VLF up to lower VHF. It is pesting the vicinity in a range of
about 100m and that's where I live. FM is not so much of a problem
but AM/SSB is.
Our nominal voltages are 230V/400V 50Hz.
I have access to the unit and can get the HVAC guys to work on it
but maybe some hints will save us some hours/days of experimenting.
Thank you in advance.

Kind regards, Eike

2657. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 13:09:23 UTC
From: tkell@blackhole.nyx.net
Message-ID: <1049807363.858476@irys.nyx.net>
Source record: 36259

In article <v953s2mc3lda7e@corp.supernews.com>,
Roy Lewallen <w7el@eznec.com> wrote:
>Mike W wrote:
>> On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>
>>>Bart wrote:
>>>
>>>>but what if ETI doesn't use microwave?
>>>
>>>Worse yet, what if they're all just listening, too?
>>>
>>
>> If you were an Intelligent being, somewhere out there, looking for
>> E.T. Intelligence and you found signals from Earth, would you continue
>> listening?. If you did then it changes the meaning of Intelligence.
>
>Just think. Expanding from the Earth at the speed of light is an
>expanding sphere of television waves. And at the very leading edge are
>Howdy Doody and the McCarthy hearings. Not to say it's all that better
>farther inside the sphere. . .
>
>Roy Lewallen, W7EL
>

What are you taking about? Howdy Doody was great! Fine humor. McCarthy
was another affair.

N3Ted

2658. FA: Air Wound Coil -- 32 uH -- 3" diam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 13:25:06 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <S4Aka.122204$0g4.3581575@news2.east.cox.net>
Source record: 36261
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3017201064

Thanks for looking,

Larry Keith
KQ4BY

2659. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 13:49:08 UTC
From: mikea@mikea.ath.cx
Message-ID: <orAka.3518$gq7.2032@newssvr19.news.prodigy.com>
Source record: 36262

Eike Lantzsch, ZP6CGE <eikelan@gmx.net> wrote:
> Hi y'all:

> Has anybody experience with quieting the RFI of an Allen Bradley
> Variable Frequency Drive for an air conditioning motor?
> The unit adjusts the speed of the motor by varying the frequency
> from 40Hz to 60Hz while keeping the voltages at 3 x 400VAC.
> The electronic unit resides in a metal cabinet but the wires to the
> motor are about 4 meters long and not shielded. The RFI is strong
> from VLF up to lower VHF. It is pesting the vicinity in a range of
> about 100m and that's where I live. FM is not so much of a problem
> but AM/SSB is.
> Our nominal voltages are 230V/400V 50Hz.
> I have access to the unit and can get the HVAC guys to work on it
> but maybe some hints will save us some hours/days of experimenting.
> Thank you in advance.

Sounds like a Really Good First Thing To Do is to wind the wires
through a ferrite toroid (or two or three) a few times. RatShack makes
one that snaps open, for just this purpose. If you can get 'em to do
it inside the cabinet, so much the better, as this will mean that
little or none of the hash will get outside the cabinet.

RF bypasses from the phases to ground inside the cabinet also would
be good, if there aren't some there already.

--
Lots of couples say, "We want a baby."

I never heard one say, "We want a teen-ager."
-- Ruth Moore, private communication

2660. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 14:20:16 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18fc7a7d9b00d01d989841@192.168.42.131>
Source record: 36263

In article <slrnb95i96.a7a.eikelan@ID-77364.user.dfncis.de>,
eikelan@gmx.net says...

<snip>

> I have access to the unit and can get the HVAC guys to work on it
> but maybe some hints will save us some hours/days of experimenting.
> Thank you in advance.

Well, lessee... Assuming local electrical codes allow it, how about
a grounded shield braid over each of those motor power leads? Or perhaps
bringing the motor's power leads through feedthrough caps in a grounded
metal enclosure?

I'm sure others will have other suggestions. Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2661. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 14:40:18 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <9pn59vkm5ug2gf55p15c6g7ou0eilseljl@4ax.com>
Source record: 36264

On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

|Bart wrote:
|>
|> but what if ETI doesn't use microwave?
|
|Worse yet, what if they're all just listening, too?

That's why you have to call CQ once in a while.

2662. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 15:00:23 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E92E36A.5FD67721@gte.net>
Source record: 36265

Roy Lewallen wrote:

> Mike W wrote:
> > On Tue, 08 Apr 2003 00:23:48 -0700, Roy Lewallen <w7el@eznec.com>
> > wrote:
> >
> >
> >>Bart wrote:
> >>
> >>>but what if ETI doesn't use microwave?
> >>
> >>Worse yet, what if they're all just listening, too?
> >>
> >
> > If you were an Intelligent being, somewhere out there, looking for
> > E.T. Intelligence and you found signals from Earth, would you continue
> > listening?. If you did then it changes the meaning of Intelligence.
>
> Just think. Expanding from the Earth at the speed of light is an
> expanding sphere of television waves. And at the very leading edge are
> Howdy Doody and the McCarthy hearings. Not to say it's all that better
> farther inside the sphere. . .
>
> Roy Lewallen, W7EL

Hi Roy,

Expanding on that theme- would ET's then conclude that the human race peaked about the time the sphere of the Dick Van Dyke show passes them, and has diminished since then?

Dale W4OP

2663. Re: Cathode follower for random wire antenna. [RX]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 15:02:08 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000058.0017484a@btinternet.com>
Source record: 36266

Hi,

> Instead of using a balun/unun and coax with a random wire, can you feed
> the random wire to a valved cathode follower circuit and match your coax
> line this way?

Yup! A number of commercial receiver distribution amplifiers, and
active antennas, did just that. They often also included a filter or two
to block big signals from the AM band though. A triode such as the 3A/167M
(417A?) was commonly used - biassed for lots of current.

Cheers - Joe

2664. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 16:03:22 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E944528.1CC7D6CE@rica.net>
Source record: 36267

"Eike Lantzsch, ZP6CGE" wrote:
>
> Hi y'all:
>
> Has anybody experience with quieting the RFI of an Allen Bradley
> Variable Frequency Drive for an air conditioning motor?
> The unit adjusts the speed of the motor by varying the frequency
> from 40Hz to 60Hz while keeping the voltages at 3 x 400VAC.
> The electronic unit resides in a metal cabinet but the wires to the
> motor are about 4 meters long and not shielded. The RFI is strong
> from VLF up to lower VHF. It is pesting the vicinity in a range of
> about 100m and that's where I live. FM is not so much of a problem
> but AM/SSB is.
> Our nominal voltages are 230V/400V 50Hz.
> I have access to the unit and can get the HVAC guys to work on it
> but maybe some hints will save us some hours/days of experimenting.
> Thank you in advance.
>
> Kind regards, Eike

I had some experience with these drives in an industrial situation.
The biggest bang for the buck was adding a common mode choke very
close to the drive on the T leads. We started out with a commercial
unit, but had to design our own with a lot more ferrite core material
to get the effect we needed. The concept is to have the 3 T leads
(twisted together) pass through a high permeability ferrite core one
or more times. We made a core out of 4 stacked 2.5 inch OD, .5 inch
thick toroids. There may also be some advantage in putting one on the
AC supply leads (or feeding the AC through a 5%, laminated iron core
choke), but the noise is mostly radiated from the T leads, since they
are driven with a fast rise time waveform.

If you want help selecting a core to build your own common mode choke,
email me.

--
John Popelish

2665. Re: SETI Technology Meeting and Microwave Workshop

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 16:11:47 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <LVhoqXBDTvk+EABo@ifwtech.co.uk>
Source record: 36268

Dale Parfitt wrote:
>> Just think. Expanding from the Earth at the speed of light is an
>> expanding sphere of television waves. And at the very leading edge are
>> Howdy Doody and the McCarthy hearings. Not to say it's all that better
>> farther inside the sphere. . .
>>
>> Roy Lewallen, W7EL
>
>Hi Roy,
>
>Expanding on that theme- would ET's then conclude that the human race
>peaked about the time the sphere of the Dick Van Dyke show passes them,
>and has diminished since then?

Gor bloimey, Mary Poppins, I hope not!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2666. Re: SDK-85 owners, monitor updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 18:12:04 UTC
From: Skipp <skipp@pilot.ucdavis.edu>
Message-ID: <b6v3dk$2tk$4@woodrow.ucdavis.edu>
Source record: 36269

Got one myself... would love to have any updates and SDK-86 information
you could/would provide.

I would be happy to provide free eprom programming to anyone who needs it.

I would be willing to post any related information on the
http://sonic.ucdavis.edu web server which might include down loaded
files.

One of the things some of you 8085 guys might like to know is that Enimac
(hope I spelled it right) made one hell of a similar 8085 trainer which is
probably still available.

It's hands down better than the SDK-85, but I'm an 8085 nut so I like them
both. The Enimac trainer has all the source code and hardware laid out...
includes some software and enhancements.

I found a company in Canada call Micept Making nice/low price
editor assembler packages for all the smaller processors in the mid
90's... bought the whole package for less than $150 us.

Of course, the famous ACC RC-85, RC-96 and RC-850 Amateur Radio Repeater
Controllers were 8085 processor based.

cheers
skipp
http://sonic.ucdavis.edu

: gudmundur <hexter@blazenet.net> wrote:
: Hello fellow 8 bit ancient computer buffs,

: I have been using the basic SDK-85 unit for 25 years, and have built
: several similar units from scratch. I have made many adjustments to the
: original somewhat flakey and unstable monitor software.

: If you use the TTY feature, here is what I have to offer,

: A direct plug in 8755A (should work in place of 8355) that is running
: a baud rate of 1200 8 N 2, instead of the strange 110, 7 M 2 that was
: supplied from Intel. I have deleted the chiclet keypad support software
: completely, giving you nearly 1 kilobyte of free 'FF' space to play in.
: I have fixed the weird stack problems also.

: I could probably supply the patches, typed on paper, a 2716 eprom, or
: maybe an 8755a eprom. Which would you desire? Any interest?

: KD3SH

2667. 900MHz Tx help, anyone please??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 18:34:15 UTC
From: FrankRF2@cableone.net
Message-ID: <rf569voj08nf1a5ighln2b7ldsm7a3ap12@4ax.com>
Source record: 36270

Hi,

Saturday I jumped at a deal at a garage sale and bought two 5"
Remington monitors ($5 each) thinking the RCA plugs on the back were
Inputs. After getting home and doing some testing it turns out they
are outputs. It has a switch to select input freq C1 and C2. I got
online and found a spec sheet that says,

Transmitter:
Frequency
Input C1: 907MHz ± 0.5MHz
Input C2: 922MHz ± 0.5MHz
Transmission power: 94 dBu (FCC Spec)
Frequency stability: ±1MHz
Harmonic Radiation: <960MHz 46dBu Max(3m)
960MHz 54dBu Max(3m)

I need a video transmitter to hook to the ice-cube camera RCA jack to
send the signal for the 5" to pick up and display.

Any suggestions for who/where I might get a kit or circuit to build
some Tx's??

Thanks in advance.

--

Regards,
Frank R Firestone II

2668. Re: Surplus AT power supply turned into HAM PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 19:24:17 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0304081124.3094f0c4@posting.google.com>
Source record: 36271

Paulo Marcondes <pepm@osite.com.br> wrote in message
news:<3E90BB1A.EED78CA0@osite.com.br>...
>[stuff deleted]
> I found that this modified power supply is quite
> noisy...Putting some split beads over the power cord
> decreased the noise a bit.
>

I would think computer supplies are to some extent counting on
being in a metal computer case (in addition to it's own case),
so they are less concerned with the output wires radiating than
switching supplies intended for powering radios.

I wonder how much signal radiates out the vents for the fan.
Covering it with some fine metal screen might help.

I can't help but think that some of the schemes for reducing
noise in cars that you'd see in old books might be applicable.
Get some high value feedthrough capacitors, if you can find
them, and mount them on the supplies case, feeding the output
lines through them. In that sort of situation, there might
also have beena small box over those feedthrough capacitors,
with some small inductors, and then maybe a second set of
feedthroughs (ie a lowpass filter) out of the smaller box.

For that matter, one might strip an unneeded switching supply,
they are cheap to find as junk, and use the toroids to build
up a better layer of filtering on the output of the supply.
I'm not even sure they put low value bypass capacitors in
parallel with the electrolytic filter caps at the output,
which might be worth doing to bypass the high frequency
harmonics.

Usually, those supplies have filtering on the AC line. If
not, one can buy AC line filters that are built into those
power jacks the supplies use.

Maybe, if they aren't there, putting 0.01uF capacitors across
the diodes in the bridge rectifier at the input might help.
Considering I now won't build linear power supplies without
those caps, having seen their usefulness, it perhaps will
help if the noise is coming out of the line cord.

Another scheme was to put a tuneable filter in series with
the +12 line out of the alternator; one book said resonate
it at 28MHz. It acts as a notch for AC on the DC line, and

presumably at that frequency because it was more troublesome there. If there's one particularly obnoxious signal out of the power supply, and it's coming out the output line (rather than radiating from the case, or coming out of the AC line), maybe a tuneable LC circuit would help.

I seem to recall mention of one commercial supply having some means of adjusting the supplies switching frequency, in case a harmonic lands at a desired frequency. This makes sense, though I'm not sure if I really read it, or simply imagine it.

Michael VE2BVW

2669. Re: TS430S REPAIR HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 20:57:24 UTC
From: Lasse SM5GLC <no_email@today.sri>
Message-ID: <5rd69vg48rsk0ioglhrdlnih76fc6cjphk@4ax.com>
Source record: 36272

Sound like the PLL is loosing lock...
Check the control voltage on the diodes!

/Lasse SM5GLC

On Sun, 6 Apr 2003 16:32:34 -0400, "Vince" <vcl@sympatico.ca> wrote:

>hi all, i need some help. i have a kenwood ts430s and my problem is that. i
>will turn on the radio i will use it for a bit it works fine. but if i
>leave it on for a while the rig will stay on but the display will go off and
>it will not tx or rx but if i turn it off and back on it will work again
>also sometimes the display will blink (off and on) and the rig will change
>the band and frequency. i need help as to what to do to repair it can anyone
>help me.....thank you
>
>
>
>
>
> Vince ve3elb
> ======================
> Email: ve3elb@rac.ca
> Visit My Webpages @ :
> www.qsl.net/ve3elb
> http://www3.sympatico.ca/vcl
>

2670. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 21:13:33 UTC
From: "rick@rickfrazier.com" <rick@rickfrazier.com>
Message-ID: <3E933B7D.5C39EF39@rickfrazier.com>
Source record: 36289
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason:

Though the list you provided was pretty reasonable, it would cost a chunk of change to stock all of the items you mentioned, and you still would be looking for more. Many years ago, when I was in the Army and was sent to Korea, I put together a somewhat similar (but much smaller) list for the year I was to be there. As I found out once I arrived, many of the parts were available there, though I needed to look around a bit and take some additional care in selecting components, as their markets are rather different than the surplus, electronic and ham stores (and online purveyors) we are now typically used to using.

What I finally learned is that I should stock up as I need parts. To explain a bit, I don't actually go looking for parts between projects, but if I encounter a good deal, I'll add to my stocks. Usually, when I start a new project, there is a need to purchase a few parts that I don't have on hand, and I'll look around to see what's available. Often, there are other bits and pieces that I could use for the "junk box" that I don't already have, and I tend to stock some of these items when I purchase items needed for the current project. This helps to take care of any minimum order issues, while at the same time, building a stock of common parts that I can use later. The only problem is that my needs have tended to change over the years, and what I thought was going to be needed (ten years ago) is something rarely used today in my projects... Times change, and so do we. Of course, there have been a few times I really wish I'd stocked up on a particular part when it was really cheap, because now it's like it's made from unobtanium, but that's the problem with some things. However you do stock up on your parts, you should realize that it may be false economy to stock large numbers of electrolytic capacitors, as they tend to "dry up" or otherwise lose capacitance over the years... I'm sure there are other parts that age sitting on the shelf, but none I've been personally bitten by in the past couple of years.

Now, if you are stocking for a doomsday scenario, where you believe that there won't be any parts suppliers any more, and you want to be able to repair the equipment you now have, I'd be stocking just about all of the parts that are currently used in your equipment first, before other general supplies. I'd particularly pay attention to proprietary devices, or components that are likely to become rapidly obsolete, or have not been used in a lot of other radios that might be scavenged for the parts later. Whenever I purchase a relatively antique piece of equipment, I tend to create a stock of replacement parts for at least the more likely failure items, just so I have them on hand. This is more for my own convenience than any worry that society is going to collapse any time

soon. Besides, where I live, if we encountered some large, global
catastrophe, like a really big meteor dropping out of the sky, I would
probably be one of the first washed into oblivion, so I probably wouldn't
have to worry about surviving the following years after civilization
collapses....

Good Luck
--Rick AH7H

Jason Hsu wrote:

> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on? I have noticed in building
> a few projects and especially from looking at the designs of many more
> that any decent homebrewer will use certain parts on a regular basis.
> I believe that any experienced homebrewer has a substantial inventory
> of common parts and makes sure to stock up when either ordering other
> items or when attending hamfests. It's frustrating to lack a certain
> critical part, and many of them are not available at Radio Shack.
> (Come on, try to buy a Germanium diode or SMA connectors at Radio
> Shack.) Every order to Digi-Key or other online/mail-order vendors
> will have shipping charges added on. There are also parts that are
> available at Radio Shack but at exorbitant prices compared to Digi-Key
> and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to
> tell me that these are rarely used and that no homebrewer stocks up on
> these.)
>
> So I am compiling a list of items that any homebrewer should stock up
> on. Please excuse the mis-numbering, as it would take too long to fix
> everything. Yes, I know that you can't have every part possible.
> However, certain items are used on not one project but many, many
> projects. For example,
>
> General items:
> 1. DC jacks
> 2. DC connectors
> 1. LM3914 display driver ICs
> 2. LM3915 display driver ICs
> 3. 1N34A germanium diodes
> 4. Zener diodes
> 5. 1/4" LED holders: available at Radio Shack
> 6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
> 7. 9V battery holders: available at Radio Shack
> 8. Nylon binding posts: exorbitant prices at Radio Shack
> 9. Chasses (metal and non-metal): available at Radio Shack, but more
> selection and better prices elsewhere
> 10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
> 11. LM741 IC amplifiers: exorbitant prices at Radio Shack
> 12. .001uF capacitors: available at Radio Shack, but not at the best

> prices
> 13. .01uF capacitors: ditto
> 14. .1uF capacitors: ditto
> 15. Electrolytic and tantalum capacitors: ditto
> 16. Mica capacitors: ditto
> 17. IC sockets
> 15. LM317 or other voltage regulators: available at Radio Shack at
> high prices
> 16. Switches: available at Radio Shack
> 17. Circuit boards: available at Radio Shack
> 18. 2N2222As: available at Radio Shack at high prices
> 19. 2N3904s: available at Radio Shack at high prices
> 20. 555 timer chips: available at Radio Shack at exorbitant prices
> 21. 2N3906s
> 22. 2N2907s
> 23. Shrink wrap (for soldering wires onto LEDs): also available at
> Radio Shack and Home Depot
> 24. Solder: ditto
> 25. Solder flux: ditto
> 26. #30-gauge wire wrap wire (for wire wrap projects or RF
> transformers if distributed capacitance is an issue and you don't like
> magnet wire): available at Radio Shack
> 27. 1/2-W Resistors: available at Radio Shack
> 28. 1N914/1N4148 diodes: available at Radio Shack
> 29. #6-32 nuts and bolts for mounting circuits: available at Home
> Depot as well as Radio Shack
> 30. Potentiometers
> 31. Knobs
> 32. 2N2219 and 2N2905???
> 33. MPF102/2N3819 or similar FETs???
> 34. 2N3055 or other power transistors???
> 35. LM723 for power supplies???
> 36. Assorted powdered iron cores T- 37/50 - 2/6 ???
> 37. PCB material ???
> 38. BNC connectors/jacks
>
> Audio items:
> 1. LM386 audio amp
> 2. Assorted audio connectors (RCA, 1/8" phone plugs)
> 3. 5532 op amps
> 4. Complementary output transistors that can handle some power
>
> RF items:
> 1. FT50-43 ferrite toroid cores: useful for many, many RF projects
> 2. #73 ferrite beads for connecting RF and DC grounds
> 3. SO-239 jacks: available at Radio Shack at higher prices
> 4. PL-259s (make sure to get the right kind for the cable): ditto
> 5. SMA connectors
> 6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
> 7. Lower loss coax

> 8. Mixers (for homebrewing transmitters and receivers)
> 9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)
> 10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and
> receivers)
> 11. 1 - 10pf piston trimmers (vhf) ???
> 12. trim caps about 80pf max (hf) ???
> 13. IF transformers: 455 kHz and 10.7 MHz (can be
> rewound for other frequencies) ???
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

2671. Transformer help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 23:23:31 UTC
From: Shephed <roll1up@smkey.com>
Message-ID: <TRIka.54003$JI.14422952@twister.neo.rr.com>
Source record: 36273

Hello all,
I'm putting together a single 6T9 tube project for a QRP club.

In working with an old ARRL article, it's calling for a Stancor PC8401
filament transformer.

Can someone give me the specs on this transformer and a good source for
getting them.

Thanks es 73
Dan, N8IE

2672. Linear amp DC input Vs Output

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 23:46:42 UTC
From: enigma_y_2000@yahoo.com
Message-ID: <3e935ef5.16696958@news.usfamily.net>
Source record: 36274

Hi,

Is it possible for a linear amplifier to have normal DC input power to the final tubes, but to be way low on output power delievered to a dummy load due to weak tubes? Yes, I'm loading it properly.

Or will the weak tubes always show up by not loading to full DC input power?

Thanks,

Bob

2673. Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 23:47:13 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0304081547.6625eea@posting.google.com>
Source record: 36275
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I posted this thread on the eham HomeBrew and Elmers forums. I want the input of all the experienced homebrewers here.

What electronic parts do you stock up on? I have noticed in building a few projects and especially from looking at the designs of many more that any decent homebrewer will use certain parts on a regular basis. I believe that any experienced homebrewer has a substantial inventory of common parts and makes sure to stock up when either ordering other items or when attending hamfests. It's frustrating to lack a certain critical part, and many of them are not available at Radio Shack. (Come on, try to buy a Germanium diode or SMA connectors at Radio Shack.) Every order to Digi-Key or other online/mail-order vendors will have shipping charges added on. There are also parts that are available at Radio Shack but at exorbitant prices compared to Digi-Key and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to tell me that these are rarely used and that no homebrewer stocks up on these.)

So I am compiling a list of items that any homebrewer should stock up on. Please excuse the mis-numbering, as it would take too long to fix everything. Yes, I know that you can't have every part possible. However, certain items are used on not one project but many, many projects. For example,

General items:
1. DC jacks
2. DC connectors
1. LM3914 display driver ICs
2. LM3915 display driver ICs
3. 1N34A germanium diodes
4. Zener diodes
5. 1/4" LED holders: available at Radio Shack
6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
7. 9V battery holders: available at Radio Shack
8. Nylon binding posts: exorbitant prices at Radio Shack
9. Chasses (metal and non-metal): available at Radio Shack, but more selection and better prices elsewhere
10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
11. LM741 IC amplifiers: exorbitant prices at Radio Shack
12. .001uF capacitors: available at Radio Shack, but not at the best prices
13. .01uF capacitors: ditto
14. .1uF capacitors: ditto
15. Electrolytic and tantalum capacitors: ditto

16. Mica capacitors: ditto
17. IC sockets
15. LM317 or other voltage regulators: available at Radio Shack at high prices
16. Switches: available at Radio Shack
17. Circuit boards: available at Radio Shack
18. 2N2222As: available at Radio Shack at high prices
19. 2N3904s: available at Radio Shack at high prices
20. 555 timer chips: available at Radio Shack at exorbitant prices
21. 2N3906s
22. 2N2907s
23. Shrink wrap (for soldering wires onto LEDs): also available at Radio Shack and Home Depot
24. Solder: ditto
25. Solder flux: ditto
26. #30-gauge wire wrap wire (for wire wrap projects or RF transformers if distributed capacitance is an issue and you don't like magnet wire): available at Radio Shack
27. 1/2-W Resistors: available at Radio Shack
28. 1N914/1N4148 diodes: available at Radio Shack
29. #6-32 nuts and bolts for mounting circuits: available at Home Depot as well as Radio Shack
30. Potentiometers
31. Knobs
32. 2N2219 and 2N2905???
33. MPF102/2N3819 or similar FETs???
34. 2N3055 or other power transistors???
35. LM723 for power supplies???
36. Assorted powdered iron cores T- 37/50 - 2/6 ???
37. PCB material ???
38. BNC connectors/jacks

Audio items:
1. LM386 audio amp
2. Assorted audio connectors (RCA, 1/8" phone plugs)
3. 5532 op amps
4. Complementary output transistors that can handle some power

RF items:
1. FT50-43 ferrite toroid cores: useful for many, many RF projects
2. #73 ferrite beads for connecting RF and DC grounds
3. SO-239 jacks: available at Radio Shack at higher prices
4. PL-259s (make sure to get the right kind for the cable): ditto
5. SMA connectors
6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
7. Lower loss coax
8. Mixers (for homebrewing transmitters and receivers)
9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)
10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and receivers)
11. 1 - 10pf piston trimmers (vhf) ???

12. trim caps about 80pf max (hf) ???
13. IF transformers: 455 kHz and 10.7 MHz (can be rewound for other frequencies) ???

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

2674. Audio Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-08 23:58:31 UTC
From: kd7zd@yahoo.com
Message-ID: <9fa88e3b.0304081558.1f6f5698@posting.google.com>
Source record: 36276

I have a need for about a 2 watt audio amp for a project. Can anyone tell me where I might find a kit or something?

Phil
KD7ZD

2675. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 00:16:20 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E936654.5030107@bellsouth.net>
Source record: 36277
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on? I have noticed in building
> a few projects and especially from looking at the designs of many more
> that any decent homebrewer will use certain parts on a regular basis.
> I believe that any experienced homebrewer has a substantial inventory
> of common parts and makes sure to stock up when either ordering other
> items or when attending hamfests. It's frustrating to lack a certain
> critical part, and many of them are not available at Radio Shack.
> (Come on, try to buy a Germanium diode or SMA connectors at Radio
> Shack.) Every order to Digi-Key or other online/mail-order vendors
> will have shipping charges added on. There are also parts that are
> available at Radio Shack but at exorbitant prices compared to Digi-Key
> and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to
> tell me that these are rarely used and that no homebrewer stocks up on
> these.)
> Assorted NPN and PNP SI transistors some power, mostly small
signal of a few variaties

> So I am compiling a list of items that any homebrewer should stock up
> on. Please excuse the mis-numbering, as it would take too long to fix
> everything. Yes, I know that you can't have every part possible.
> However, certain items are used on not one project but many, many
> projects. For example,
>
> General items:
> 1. DC jacks
> 2. DC connectors
> 1. LM3914 display driver ICs
> 2. LM3915 display driver ICs
> 3. 1N34A germanium diodes
> 4. Zener diodes
> 5. 1/4" LED holders: available at Radio Shack
> 6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
> 7. 9V battery holders: available at Radio Shack
> 8. Nylon binding posts: exorbitant prices at Radio Shack
> 9. Chasses (metal and non-metal): available at Radio Shack, but more
> selection and better prices elsewhere
> 10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
> 11. LM741 IC amplifiers: exorbitant prices at Radio Shack
> 12. .001uF capacitors: available at Radio Shack, but not at the best

> prices
> 13. .01uF capacitors: ditto
> 14. .1uF capacitors: ditto
> 15. Electrolytic and tantalum capacitors: ditto
> 16. Mica capacitors: ditto
> 17. IC sockets
> 15. LM317 or other voltage regulators: available at Radio Shack at
> high prices
> 16. Switches: available at Radio Shack
> 17. Circuit boards: available at Radio Shack
> 18. 2N2222As: available at Radio Shack at high prices
> 19. 2N3904s: available at Radio Shack at high prices
> 20. 555 timer chips: available at Radio Shack at exorbitant prices
> 21. 2N3906s
> 22. 2N2907s
> 23. Shrink wrap (for soldering wires onto LEDs): also available at
> Radio Shack and Home Depot
> 24. Solder: ditto
> 25. Solder flux: ditto
> 26. #30-gauge wire wrap wire (for wire wrap projects or RF
> transformers if distributed capacitance is an issue and you don't like
> magnet wire): available at Radio Shack
> 27. 1/2-W Resistors: available at Radio Shack
> 28. 1N914/1N4148 diodes: available at Radio Shack
> 29. #6-32 nuts and bolts for mounting circuits: available at Home
> Depot as well as Radio Shack
> 30. Potentiometers
> 31. Knobs
> 32. 2N2219 and 2N2905???
> 33. MPF102/2N3819 or similar FETs???
> 34. 2N3055 or other power transistors???
> 35. LM723 for power supplies???
> 36. Assorted powdered iron cores T- 37/50 - 2/6 ???
> 37. PCB material ???
> 38. BNC connectors/jacks
>
> Audio items:
> 1. LM386 audio amp
> 2. Assorted audio connectors (RCA, 1/8" phone plugs)
> 3. 5532 op amps
> 4. Complementary output transistors that can handle some power
>
> RF items:
> 1. FT50-43 ferrite toroid cores: useful for many, many RF projects
> 2. #73 ferrite beads for connecting RF and DC grounds
> 3. SO-239 jacks: available at Radio Shack at higher prices
> 4. PL-259s (make sure to get the right kind for the cable): ditto
> 5. SMA connectors
> 6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
> 7. Lower loss coax

> 8. Mixers (for homebrewing transmitters and receivers)
> 9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)
> 10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and
> receivers)
> 11. 1 - 10pf piston trimmers (vhf) ???
> 12. trim caps about 80pf max (hf) ???
> 13. IF transformers: 455 kHz and 10.7 MHz (can be
> rewound for other frequencies) ???
>
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

I keep an eye out at hamfests and fleabay for:
Hammarlund variable caps of the "MC" type (both centerline and
offset types). Dip mica caps when available in bulk cheap.
Filter chokes, small audio transformers and power transformers.
1/4, 1/2 watt resistor assortments. Small signal transistors, linear
IC's both op amps and rf/audio types. Crystals, rf chokes, adjustable
core coil forms (transistor IF size units with mini slug adjustment, can
be rewound to desired inductance).

I've got some un-usual junk in the junkbox that I thought I could use.
Several
old turret 'standard coil' tv tuners. Two of them could be ganged and
fitted
with torriod core coils for a 12 band radio front end. A box filled
with ceramic
and fiber rotorary switch sections plus some used shafts and index
assemblies
(the switch sections are mostly unused, everything else from junked
switchs) for
custom switches. IF cans from old radios, tv's and military junk.
(several from
bc453's @85 khz, the rest from bc454's @1415khz). Old AA5 two and three
section variable caps and some mini's from transistor sets, some AM/FM.

Guess I'm just a pack rat. Anything I can find, especially if in bulk
and cheap
I'll pack away for a rainy day.

I will rarely buy any parts at rat shack EXCEPT for when they have
'special purchases'
of good stuff cheap, or the store manager is dumping surplus stock being
discontinued.
I got a bag full of GI sound generator chips that way at rat shack.

2676. Re: Transformer help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 00:43:58 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87d6jwlctt.fld@barrow.com>
Source record: 36278

"Shephed" <roll1up@smkey.com> wrote:
>Hello all,
>I'm putting together a single 6T9 tube project for a QRP club.
>
>In working with an old ARRL article, it's calling for a Stancor PC8401
>filament transformer.
>
>Can someone give me the specs on this transformer and a good source for
>getting them.
>
>Thanks es 73
>Dan, N8IE

I searched with google and could not find anything specific on
a Stancor PC8401 transformer.

However, there is a data sheet for the 6T9 tube at

<http://www.qsl.net/wd4nka/TOOLS/Manual/6t9.html>

And it says the 6T9 needs 6.3 VAC at 0.93 Amps for filament
power. If that tube is all that the transformer is powering,
any 6.3 volt filament transformer for 1 Amp or more will do
the trick.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2677. Re: Audio Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 00:50:25 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E94C0A9.ED67A70@rica.net>
Source record: 36279

Phil wrote:
>
> I have a need for about a 2 watt audio amp for a project. Can anyone
> tell me where I might find a kit or something?
>
> Phil
> KD7ZD

You might start by looking at a list of common integrated amplifiers
and their application notes an pick something you like.

low power N.S. chips:
http://www.national.com/parametric/0,1850,799,00.html
higher power N.S. chips:
http://www.national.com/parametric/0,1850,811,00.html

--
John Popelish

2678. Suitable sub...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 01:01:23 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <gas69vc2e02jps9bnve4sq4fj3otrm8nks@4ax.com>
Source record: 36280

Due to a lack of expertise at reading data sheets....I was wondering
if anyone knows if a SJ 723J would be a suitable sub for a LM723
regulator

I've come across a cache of the SG723J's

thanks for the help,
Tracy
Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2679. FS: A few NOS (1946)45-180pf Gear driven air variables w/pics!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 01:39:11 UTC
From: rlucch2098@aol.com
Message-ID: <20030408213911.25918.00000878@mb-fd.aol.com>
Source record: 36281

Hi Guys;
I have for Sale:
a few of these gear driven air variables that my Digital B&K RLC bridge shows it as 45-180pf.
They are new old stock.
4"l x 2-1/2"h x 3"w.
Box was marked for BC-696A, 1946(?).
Price is $10.00 ea plus 3lbs shipping from 11758
Pics>>
http://www.myradioroom.com/45-180pfgearcap1.jpg
http://www.myradioroom.com/45-180pfgearcap2.jpg
I finally found a large stash of caps, some new, some used & all sorts of values. Pse e-mail me if you need others.

Thanks & 73,
Rich WA2RQY(1961)
WEB-PAGE http://members.aol.com/rlucch2098/index.htm

2680. FS: NOS-CARDWELL 7 SECTION, GEAR DRIVEN, AIR CAP w/pics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 01:45:28 UTC
From: rlucch2098@aol.com
Message-ID: <20030408214528.25918.00000880@mb-fd.aol.com>
Source record: 36282

Hi Guys;
I have for Sale:
Cardwell NOS AIR VARIABLE, gear driven, super USA quality, Made in Brooklyn, NY

3 section area >
40-82pf
18-110pf
18-110pf

4 section area>
14-120pf
14-120pf
20-213pf
20-213pf
Gotta see this Gem!
Price is $50.00 ea plus 5lbs shipping from 11758
Pics>>
http://www.myradioroom.com/cardwell7section1.jpg
http://www.myradioroom.com/cardwell7section2.jpg
http://www.myradioroom.com/cardwell7section3.jpg
http://www.myradioroom.com/cardwell7section4.jpg

I finally found a large stash of caps, some new, some used & all sorts of values. Pse e-mail me if you need others.

Thanks & 73,
Rich WA2RQY(1961)
WEB-PAGE http://members.aol.com/rlucch2098/index.htm

2681. FS: CARDWELL 2-SECTION air Variable 25-230pf ea. w/pic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 01:50:08 UTC
From: rlucch2098@aol.com
Message-ID: <20030408215008.25918.00000882@mb-fd.aol.com>
Source record: 36283

Hi Guys;
I have for Sale:
Good used Cardwell dual-section air cap w/1/4" shaft.
Value is 25-230pf ea. section.
5-1/2"l x 3-3/8" open x 4"w.
One corner of the insulator strip was repaied with epoxy but very strong &
quite usable!
Price is $15.00 plus shipping, 3lb from 11758
Pics>>
http://www.myradioroom.com/cardwell25-230pf.jpg
Thanks & 73,
Rich WA2RQY(1961)
WEB-PAGE http://members.aol.com/rlucch2098/index.htm

2682. Re: Suitable sub...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 02:08:25 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E94D2F7.1750A863@rica.net>
Source record: 36284

Tracy Fort wrote:
>
> Due to a lack of expertise at reading data sheets....I was wondering
> if anyone knows if a SJ 723J would be a suitable sub for a LM723
> regulator
>
> I've come across a cache of the SG723J's

It sure looks like the same thing to me.

http://www.microsemi.com/datasheets/SG723.pdf

--
John Popelish

2683. Re: Surplus AT power supply turned into HAM PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 02:13:52 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E9381E0.4B5421BB@osite.com.br>
Source record: 36285

Michael Black wrote:
>
> I would think computer supplies are to some extent counting on
> being in a metal computer case (in addition to it's own case),
> so they are less concerned with the output wires radiating than
> switching supplies intended for powering radios.

I think you are right. I don't said explicitly, but I have
no AC ground. So it doesn't matter if the metal case was
intended to block the radiating energy, since it is
insulated from ground. (no good here)

> I wonder how much signal radiates out the vents for the fan.
> Covering it with some fine metal screen might help.

At 33kHz, the wavelength is much bigger than the fan hole...
It is not a real hole, but the case is _well_ vented in that
spot. IMVHO, it may block even some microwaves...

> I can't help but think that some of the schemes for reducing
> noise in cars that you'd see in old books might be applicable.

You DID help, if nothing else, now I have something to read
about...
Thanks for the help, Michael

VE2BVW de PU2PIX, 73 73
...-.-

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

2684. Re: Linear amp DC input Vs Output

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 03:44:46 UTC
From: hexter@blazenet.net
Message-ID: <v975pejpj05o75@corp.supernews.com>
Source record: 36286

In article <3e935ef5.16696958@news.usfamily.net>, enigma_y_2000@yahoo.com says...
>
>Hi,
>
>Is it possible for a linear amplifier to have normal DC input power to
>the final tubes, but to be way low on output power delievered to a
>dummy load due to weak tubes? Yes, I'm loading it properly.
>
>Or will the weak tubes always show up by not loading to full DC input
>power?
>
>Thanks,
>
>Bob

My finding has been that the efficiency will drop maybe 3 to 5 percent, but that is hard to know unless you have kept careful logs of the amp over time. You will find that 'PEP' will have dropped 20 or 30 percent, while the 'average' output appears to have dropped far less. I have often found that weak tubes just won't draw current on the higher 'low' bands. Power output will be terrible on 10 mtrs, but only somewhat lower on 80 mtrs.

One thing for sure.... If you put power in, and don't see power out, you shall surely notice brightly glowing anodes, followed shortly thereafter by screams when you price new glass finals, or, you get to enjoy the smoke and flame of an RFC with a shorted turn or two turning into a flaming slag pile. I had a 'low output' amp do that to me.

2685. Re: Transformer help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 03:51:53 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <pm579vcrvipronp5vr186h3eocrku0vfjs@4ax.com>
Source record: 36287

On Tue, 08 Apr 2003 23:23:31 GMT, "Shephed" <roll1up@smkey.com> wrote:

|Hello all,
|I'm putting together a single 6T9 tube project for a QRP club.
|
|In working with an old ARRL article, it's calling for a Stancor PC8401
|filament transformer.
|
|Can someone give me the specs on this transformer and a good source for
|getting them.

Specs yes:

High voltage 235-0-235 @ 40 mA DC.

Rectifier Filament 5.0 VAC @ 2 A

Other Filament 6.3 VAC CT @ 2 A.

Source no:

The above data from a 1961 Stancor catalog (never throw anything away
<g>) so your chance of buying one is nil.

Almost any old radio with a power transformer (non-AC/DC) should yield
something suitable. This is homebrew after all.

2686. What's With The Quicktime!! Was: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 06:18:17 UTC
From: antispam <nospam@please.net>
Message-ID: <3E93BB29.1050708@please.net>
Source record: 36288
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

Hey Guys! Who keeps embedding Quicktime in the newgroup postings!? I thought netiquette dictated that newsgroups were text-only!

Alan Yates wrote:

> Graeme Zimmer wrote:
>
>> Hi Folks,
>>
>> Some of you might be interested in my little LCD Oscilloscope project.
>>
>> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
>>
>> details at http://www.users.bigpond.com/zim123/Graphic/default.html
>
>
> Very nice, the PSK31 project is interesting too.
>

2687. Re: Linear amp DC input Vs Output

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 08:49:00 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znn0jbsz.fld@barrow.com>
Source record: 36290

enigma_y_2000@yahoo.com wrote:
>Hi,
>
>Is it possible for a linear amplifier to have normal DC input power to
>the final tubes, but to be way low on output power delievered to a
>dummy load due to weak tubes? Yes, I'm loading it properly.
>
>Or will the weak tubes always show up by not loading to full DC input
>power?

It depends on how you define "weak" tubes.

A tube that has low cathode emission will have difficulty
loading up to full DC input power, because it can't supply the
current. (Other physical problems, such as a fried screen grid,
could cause the same effect.)

A tube that is gassy will show high current, but low output. Just
the opposite of above.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2688. Re: What's With The Quicktime!! Was: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 09:55:39 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <v6Ska.58400$jE3.1254438@news.xtra.co.nz>
Source record: 36291
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

What Quicktime??

"antispam" <nospam@please.net> wrote in message
news:3E93BB29.1050708@please.net...
> Hey Guys! Who keeps embedding Quicktime in the newgroup postings!? I
thought
> netiquette dictated that newsgroups were text-only!
>
>
>
> Alan Yates wrote:
>
> > Graeme Zimmer wrote:
> >
> >> Hi Folks,
> >>
> >> Some of you might be interested in my little LCD Oscilloscope project.
> >>
> >> It uses a 256x128 graphics LCD driven by a PIC18C252 processor
> >>
> >> details at http://www.users.bigpond.com/zim123/Graphic/default.html
> >
> >
> > Very nice, the PSK31 project is interesting too.
> >
>

2689. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 11:25:58 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3E940498.117A6168@uwe.ac.uk>
Source record: 36292
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
>
> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on? I have noticed in building
> a few projects and especially from looking at the designs of many more
> that any decent homebrewer will use certain parts on a regular basis.

From Ham Fests :-

All the stuff that is no longer available or very expensive new.
Mostly QRO for linears and ATUs

Ceramic standoffs
Vacuum relays & caps
High voltage paper in oil caps
mica caps.
Ceramic wafer switches
Die cast boxes
19" rack boxes and panels
big HV transformers
feed-through caps, threaded for preference.
ETFE jacketed silver plated copper wire
coil and bar roller coasters
BA nuts and bolts
Turns counting dials
Heliax
FSD <= 100 uA meters

From current suppliers :-

OA47s
Shottky diodes
Ferrite and dust iron toroids
BNC and N type connectors

vy 73

Andy, M3ABC

2690. Re: Surplus AT power supply turned into HAM PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 12:34:49 UTC
From: Larry Rothman <y10104@email.mot.com>
Message-ID: <b710gpcbt1@localhost.localdomain>
Source record: 36293

Whoa, be careful of using .01uF on a switching supply across the diodes. At 60Hz, they're fine. A switcher runs at anywhere from 100KHz to 300KHz. Think of what that cap is going to look like at that freq. You'll probably need to do some math here to find the most favouable value.
You can always bring out the power in shielded cables. ;-)

Regards,
Larry
VE3LRI

"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E9381E0.4B5421BB@osite.com.br...
> Michael Black wrote:
> >
> > I would think computer supplies are to some extent counting on
> > being in a metal computer case (in addition to it's own case),
> > so they are less concerned with the output wires radiating than
> > switching supplies intended for powering radios.
>
> I think you are right. I don't said explicitly, but I have
> no AC ground. So it doesn't matter if the metal case was
> intended to block the radiating energy, since it is
> insulated from ground. (no good here)
>
> > I wonder how much signal radiates out the vents for the fan.
> > Covering it with some fine metal screen might help.
>
> At 33kHz, the wavelength is much bigger than the fan hole...
> It is not a real hole, but the case is _well_ vented in that
> spot. IMVHO, it may block even some microwaves...
>
> > I can't help but think that some of the schemes for reducing
> > noise in cars that you'd see in old books might be applicable.
>
> You DID help, if nothing else, now I have something to read
> about...
> Thanks for the help, Michael
>
> VE2BVW de PU2PIX, 73 73
> ...-.-
>
>
> --
> Paulo E.P. Marcondes

> Ge�logo - Mestrando USP
> pepm@osite.com.br

2691. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 13:07:46 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <aq2cndyDjP6GgQmjXTWcpw@comcast.com>
Source record: 36294
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

My wife says she is gonna bury me in the stuff. It will take a large
coffin.

OpAmps -- I wouldn't hit a dog in the derriere with a '741
TLC2274, TLC2272
NE5532
AD797 plus a lot of samples from AD
LT1014, LT1013,LT1028, plus a lot of samples from LT.
LM3875 power op amp
LMD18201 Motor Control
UC3843, MC34166, LM3524, LM3525 switcher chips
ULN2803a relay drivers
Binding post connectors
BUZ80's, IRFP240+IRFP9240's
1N, 10N, 100N bypass caps
10uF tantalum's
330uF low ESR electrolytics
CMOS -- probably 100 chips or so -- software in solder as Ciarcia used to
say.

16F84's, 16F873, 16F877 from Microchip

7-segment LED's

I can't go by the dump without hacking out the power supply of a PC! Some
people go to the dump to deposit, others to withdraw.

> General items:
> 1. DC jacks
> 2. DC connectors
> 1. LM3914 display driver ICs
> 2. LM3915 display driver ICs
> 3. 1N34A germanium diodes
> 4. Zener diodes
> 5. 1/4" LED holders: available at Radio Shack
> 6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
> 7. 9V battery holders: available at Radio Shack
> 8. Nylon binding posts: exorbitant prices at Radio Shack
> 9. Chasses (metal and non-metal): available at Radio Shack, but more
> selection and better prices elsewhere
> 10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
> 11. LM741 IC amplifiers: exorbitant prices at Radio Shack
> 12. .001uF capacitors: available at Radio Shack, but not at the best
> prices
> 13. .01uF capacitors: ditto

> 14. .1uF capacitors: ditto
> 15. Electrolytic and tantalum capacitors: ditto
> 16. Mica capacitors: ditto
> 17. IC sockets
> 15. LM317 or other voltage regulators: available at Radio Shack at
> high prices
> 16. Switches: available at Radio Shack
> 17. Circuit boards: available at Radio Shack
> 18. 2N2222As: available at Radio Shack at high prices
> 19. 2N3904s: available at Radio Shack at high prices
> 20. 555 timer chips: available at Radio Shack at exorbitant prices
> 21. 2N3906s
> 22. 2N2907s
> 23. Shrink wrap (for soldering wires onto LEDs): also available at
> Radio Shack and Home Depot
> 24. Solder: ditto
> 25. Solder flux: ditto
> 26. #30-gauge wire wrap wire (for wire wrap projects or RF
> transformers if distributed capacitance is an issue and you don't like
> magnet wire): available at Radio Shack
> 27. 1/2-W Resistors: available at Radio Shack
> 28. 1N914/1N4148 diodes: available at Radio Shack
> 29. #6-32 nuts and bolts for mounting circuits: available at Home
> Depot as well as Radio Shack
> 30. Potentiometers
> 31. Knobs
> 32. 2N2219 and 2N2905???
> 33. MPF102/2N3819 or similar FETs???
> 34. 2N3055 or other power transistors???
> 35. LM723 for power supplies???
> 36. Assorted powdered iron cores T- 37/50 - 2/6 ???
> 37. PCB material ???
> 38. BNC connectors/jacks
>
> Audio items:
> 1. LM386 audio amp
> 2. Assorted audio connectors (RCA, 1/8" phone plugs)
> 3. 5532 op amps
> 4. Complementary output transistors that can handle some power
>
> RF items:
> 1. FT50-43 ferrite toroid cores: useful for many, many RF projects
> 2. #73 ferrite beads for connecting RF and DC grounds
> 3. SO-239 jacks: available at Radio Shack at higher prices
> 4. PL-259s (make sure to get the right kind for the cable): ditto
> 5. SMA connectors
> 6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
> 7. Lower loss coax
> 8. Mixers (for homebrewing transmitters and receivers)
> 9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)

> 10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and
> receivers)
> 11. 1 - 10pf piston trimmers (vhf) ???
> 12. trim caps about 80pf max (hf) ???
> 13. IF transformers: 455 kHz and 10.7 MHz (can be
> rewound for other frequencies) ???
>
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

2692. Re: Audio Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 13:09:57 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <vMednX0z9b4AgQmjXTWcqQ@comcast.com>
Source record: 36295

search National under "boombox" -- they have a line for ghetto blasters, no kidding! For higher power, the LM3875 and LM3886 are very popular, particularly as inverted op-amp single chip solutions. I've used these for a number of projects.

"John Popelish" <jpopelish@rica.net> wrote in message news:3E94C0A9.ED67A70@rica.net...
> Phil wrote:
> >
> > I have a need for about a 2 watt audio amp for a project. Can anyone
> > tell me where I might find a kit or something?
> >
> > Phil
> > KD7ZD
>
> You might start by looking at a list of common integrated amplifiers
> and their application notes an pick something you like.
>
> low power N.S. chips:
> http://www.national.com/parametric/0,1850,799,00.html
> higher power N.S. chips:
> http://www.national.com/parametric/0,1850,811,00.html
>
> --
> John Popelish

2693. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 16:18:09 UTC
From: mcalhoun@ksu.edu
Message-ID: <b71h41$msc@unix1.cc.ksu.edu>
Source record: 36296
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

>What electronic parts do you stock up on? ....

Simple answer: EVERYTHING!
And then add some more!

After all, doesn't s/he who dies owning the biggest junque box win? :-)

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2694. A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 16:28:43 UTC
From: mcalhoun@ksu.edu
Message-ID: <b71hnr$nr3@unix1.cc.ksu.edu>
Source record: 36197

If switching power supplies do NOT have isolation transformers, do such supplies isolate the output(s) from ground?

Normal house pole-pigs produce a 120-volt "phase" (not sure if that is the correct word) on either side of ground/common. If a house is well-wired, both phases may be present at wall outlets in any particular room. If one plugs a computer into one phase and another computer into the other phase, are their power-supply outputs (including ground or chassis) at the (approximate) same potential, or might there be 120 volts difference?

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2695. Re: A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 16:45:27 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Fc6cnZeXEIz80gmjXTWcqg@cnmnetwork.com>
Source record: 36198

Yes they are isolated. The main oscillator is not, but there is a high frequency transformer to develop the outputs.

Yes it's safe to plug computers into different phases; the outputs are still isolated.

2696. Hookup assistance needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 17:01:16 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18fdf1aa57cebc7898984c@192.168.42.131>
Source record: 36199

If anyone has used an HP 8590A spectrum analyzer, in conjunction with an HP 8444A tracking generator, would you please get in touch with me and let me know what needs to be interconnected between the two, besides the first LO, to make the thing work? The manuals I've got don't have zip on it, and Agilent tech "support" is less than helpful.

Thanks much.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

2697. Re: A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 17:01:23 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E9451D5.7030504@invalid.invalid>
Source record: 36200

mcalhoun wrote:
> If switching power supplies do NOT have isolation transformers, do such
> supplies isolate the output(s) from ground?
>
> Normal house pole-pigs produce a 120-volt "phase" (not sure if that is
> the correct word) on either side of ground/common. If a house is well-
> wired, both phases may be present at wall outlets in any particular room.
> If one plugs a computer into one phase and another computer into the other
> phase, are their power-supply outputs (including ground or chassis) at the
> (approximate) same potential, or might there be 120 volts difference?

To phrase it a bit differently..

Switching power supplies in computers start with a rectifier right off
the power line. This then drives a power oscillator operating at a
relatively high frequency. (tens of KHz)

This oscillator, in turn, drives a transformer. This transformer
provides isolation.

So the circuitry on the primary side of the transformer - the rectifier
and power oscillator - is not isolated. You must take appropriate
precautions when working on it. However, the secondary side - the one
that's connected to the computer's chassis - *is* isolated, through the
transformer, just as if a standard linear supply w/60Hz transformer was
used.

(WARNING! This applies only to computers. I have seen plenty of other
devices where the switching supply is NOT isolated from the power line!
TV sets come to mind.)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2698. Re: A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 17:11:15 UTC
From: troglodite@aol.com
Message-ID: <20030409131115.08890.00000678@mb-fj.aol.com>
Source record: 36201

>If switching power supplies do NOT have isolation transformers, do such
>supplies isolate the output(s) from ground?
>
>Normal house pole-pigs produce a 120-volt "phase" (not sure if that is
>the correct word) on either side of ground/common. If a house is well-
>wired, both phases may be present at wall outlets in any particular room.
>If one plugs a computer into one phase and another computer into the other
>phase, are their power-supply outputs (including ground or chassis) at the
>(approximate) same potential, or might there be 120 volts difference?

Computer switching supplies do have an isolation transformer of a sort. The difference is that it is operated at the switching frequency, so it is relatively small. Isolation for regulation purposes is usually by virtue of an optical coupler.

Normal US house wiring in urban areas is "split phase" consisting of a neutral, and two "hot" wires 180 degrees out of phase. The voltage between the two phases is twice the voltage between the neutral and one phase. However, the "ground" is a different animal from the "neutral." While it is true they are connected together at some point, they are considered separate entities. The ground conductor on a 3-wire cord is indeed usually connected to the chassis of your typical computer power supply. The neutral, however is not, and therefore EVEN IF YOUR OUTLETS ARE WIRED INCORRECTLY, as long as the ground pin maintains its integrity it is impossible to have a potential difference between two computer chassis. If the ground is unconnected or defeated, you still would not be able to have lethal potentials between chassis, but there could be considerable leakage through the line filtering networks.

If this doesn't answer your question, write me directly.

Doug Moore KB9TMY

2699. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 17:56:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <24l89v4htdb3lah23npdbhshb98c0h4fml@4ax.com>
Source record: 36202
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 8 Apr 2003 16:47:13 -0700, jason_hsu@my-deja.com (Jason Hsu) wrote:

>I posted this thread on the eham HomeBrew and Elmers forums. I want
>the input of all the experienced homebrewers here.
>
>What electronic parts do you stock up on?

Hi Jason,

I have a full storeroom, but it did not come through an introspection of building and filling an ark.

No, I observe a simple rule of construction in each of my projects for various customers: buy for three units, build two, deliver one. Odd as it may seem, the extra parts from any previous project rarely find their way to the next. As such the parts on store have grown through accretion. About the only things that I do stock and rotate are of the lowest of low tech: nuts, screws, washers, boxes.... They are closely followed by the next rung in order: knobs, switches, connectors, fuses....

As for your exhaustive list (seems to me I recommended a suite of ferrites for your SWR meter project), that was too long by half being dominated by the high end of tech (you need a wider variety of caps and resistors if you are going to put the linear chips to work).

Another rule while I've got the soapbox: design to the smallest number of connections or try to force those connects into a smaller package. This means fewer parts, and if you haven't smelled the coffee yet, digitize as quickly as you can. Connections are expensive.

My design for the Black Box monitored several dozen parameters through sensors placed throughout the airframe. These sensors each had at least two lines, if not more (there were a lot of synchro/servo lines), and all of those leads arriving at my backplane passed through two 300 pin connectors. Those two connectors alone cost about $2 a pin. These suckers were specified as ZIF (Zero Insertion Force) and yet it took two men and a boy to seat them. Of these 600 leads, few were digital, maybe 2 or 3.

Once inside, you would find little evidence of linear design. I did not have an energy budget for their individual conditioning. I did not have a heat budget to support conditioning if I could. I did not have a volume budget that would allow all that circuitry anyway. No, the only physical evidence of deference to linear signals was found in resistor/capacitor pairs to cut down on HF noise - then the signal was

immediately sampled and the rest is digital history.

Without having taken the fast lane to digitization, I would have had to designed more connections to support what was demonstrably unneeded: signal conditioning. This is not to say I abandoned it totally. There were the snubbers mentioned, but I also had several linear circuits that were multiplexed (again, cut the number of components and connections).

To put icing on the cake, I still have samples of the processor, ADC and DAC's, multiplexors (low "on" resistance cross point) and Op Amps from the crash recorder sitting on the shelf in the storeroom. I've yet to figure out how to put them to work on the "current" project.

73's
Richard Clark, KB7QHC

2700. Never mind... I figured it out

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 20:16:21 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18fe1f70cd50ca7498984e@192.168.42.131>
Source record: 36203

Let me rephrase my earlier post. For those who want to hook the HP 8444A tracking generator to their 8590A spectrum analyzer, the trick (besides having option 059 on the tracking gen) is:

--Connect a short BNC-ended 50-ohm jumper between the '500 MHz LO Out' and 'Third LO In' jacks on the back of the generator.

--Run another BNC-ended 50-ohm cable from the SpecAn's '1st LO Out' jack to the generator's '1st LO In.'

Calibrate the generator output, and Viola! You're done!

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
KC7GR -- kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

2701. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 20:18:29 UTC
From: tkell@blackhole.nyx.net
Message-ID: <1049919509.252975@irys.nyx.net>
Source record: 36204
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

There was a thread on QRP-L about this a few years ago. Chuck Adams put
out a nice list of things to look for. You might hunt for that.

In article <f7d9a152.0304081547.6625eea@posting.google.com>,
Jason Hsu <jason_hsu@my-deja.com> wrote:
>I posted this thread on the eham HomeBrew and Elmers forums. I want
>the input of all the experienced homebrewers here.
>
>What electronic parts do you stock up on? I have noticed in building
>a few projects and especially from looking at the designs of many more
>that any decent homebrewer will use certain parts on a regular basis.
>I believe that any experienced homebrewer has a substantial inventory
>of common parts and makes sure to stock up when either ordering other
>items or when attending hamfests. It's frustrating to lack a certain
>critical part, and many of them are not available at Radio Shack.
>(Come on, try to buy a Germanium diode or SMA connectors at Radio
>Shack.) Every order to Digi-Key or other online/mail-order vendors
>will have shipping charges added on. There are also parts that are
>available at Radio Shack but at exorbitant prices compared to Digi-Key
>and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to
>tell me that these are rarely used and that no homebrewer stocks up on
>these.)
>
>So I am compiling a list of items that any homebrewer should stock up
>on. Please excuse the mis-numbering, as it would take too long to fix
>everything. Yes, I know that you can't have every part possible.
>However, certain items are used on not one project but many, many
>projects. For example,
>
>General items:
>1. DC jacks
>2. DC connectors
>1. LM3914 display driver ICs
>2. LM3915 display driver ICs
>3. 1N34A germanium diodes
>4. Zener diodes
>5. 1/4" LED holders: available at Radio Shack
>6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
>7. 9V battery holders: available at Radio Shack
>8. Nylon binding posts: exorbitant prices at Radio Shack
>9. Chasses (metal and non-metal): available at Radio Shack, but more
>selection and better prices elsewhere
>10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack

>11. LM741 IC amplifiers: exorbitant prices at Radio Shack
>12. .001uF capacitors: available at Radio Shack, but not at the best
>prices
>13. .01uF capacitors: ditto
>14. .1uF capacitors: ditto
>15. Electrolytic and tantalum capacitors: ditto
>16. Mica capacitors: ditto
>17. IC sockets
>15. LM317 or other voltage regulators: available at Radio Shack at
>high prices
>16. Switches: available at Radio Shack
>17. Circuit boards: available at Radio Shack
>18. 2N2222As: available at Radio Shack at high prices
>19. 2N3904s: available at Radio Shack at high prices
>20. 555 timer chips: available at Radio Shack at exorbitant prices
>21. 2N3906s
>22. 2N2907s
>23. Shrink wrap (for soldering wires onto LEDs): also available at
>Radio Shack and Home Depot
>24. Solder: ditto
>25. Solder flux: ditto
>26. #30-gauge wire wrap wire (for wire wrap projects or RF
>transformers if distributed capacitance is an issue and you don't like
>magnet wire): available at Radio Shack
>27. 1/2-W Resistors: available at Radio Shack
>28. 1N914/1N4148 diodes: available at Radio Shack
>29. #6-32 nuts and bolts for mounting circuits: available at Home
>Depot as well as Radio Shack
>30. Potentiometers
>31. Knobs
>32. 2N2219 and 2N2905???
>33. MPF102/2N3819 or similar FETs???
>34. 2N3055 or other power transistors???
>35. LM723 for power supplies???
>36. Assorted powdered iron cores T- 37/50 - 2/6 ???
>37. PCB material ???
>38. BNC connectors/jacks
>
>Audio items:
>1. LM386 audio amp
>2. Assorted audio connectors (RCA, 1/8" phone plugs)
>3. 5532 op amps
>4. Complementary output transistors that can handle some power
>
>RF items:
>1. FT50-43 ferrite toroid cores: useful for many, many RF projects
>2. #73 ferrite beads for connecting RF and DC grounds
>3. SO-239 jacks: available at Radio Shack at higher prices
>4. PL-259s (make sure to get the right kind for the cable): ditto
>5. SMA connectors

>6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
>7. Lower loss coax
>8. Mixers (for homebrewing transmitters and receivers)
>9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)
>10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and
>receivers)
>11. 1 - 10pf piston trimmers (vhf) ???
>12. trim caps about 80pf max (hf) ???
>13. IF transformers: 455 kHz and 10.7 MHz (can be
>rewound for other frequencies) ???
>
>
>Jason Hsu, AG4DG
>usenet@@@@jasonhsu.com

2702. PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 20:51:49 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <DwdMmwBlfll+EwL9@langwang.demon.co.uk>
Source record: 36205

Sorry for raising old subject but I've managed to wipe the
answers I saved from last time someone raised the question before I got
round to downloading.

Can anyone recommend a freeware/shareware/limited edition PCB
drafting s/w package with the facility to download the finished product
in a standard format such as jpeg or Paintshop. I don't make many PCBs
but I'd at least like those I do to look neat - even if these days the
bits have to come out of my own junk box.

Thanks,
--
Dick
GM0MNL

2703. Re: A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 21:09:00 UTC
From: averyfineman@aol.com
Message-ID: <20030409170900.13737.00000051@mb-fs.aol.com>
Source record: 36206

In article <b71hnr$nr3@unix1.cc.ksu.edu>, mcalhoun@ksu.edu (mcalhoun) writes:

>If switching power supplies do NOT have isolation transformers, do such
>supplies isolate the output(s) from ground?

That depends on the type of switching power supply.

In the newer switching supply buck and boost IC designs using
a minimal parts count, the amount of "isolation" is equivalent to
the lowest breakdown voltage of any component.

"Isolation" transformers of the older variety are basically 1:1
primary to secondary ratios, usually with an electrostatic
shield between windings. Those were intended to remove the
mis-wired AC outlet components between loads that could
have existed. Their frequency of "isolation" is in the audio
range and an electrostatic shield helps keep load transients
out of the input line; that doesn't eliminate it, merely reduces
it. The electrostatic shield reduces capacitive coupling from
line to load but doesn't eliminate it.

>Normal house pole-pigs produce a 120-volt "phase" (not sure if that is
>the correct word) on either side of ground/common. If a house is well-
>wired, both phases may be present at wall outlets in any particular room.
>If one plugs a computer into one phase and another computer into the other
>phase, are their power-supply outputs (including ground or chassis) at the
>(approximate) same potential, or might there be 120 volts difference?

There can be a 208 VAC difference with the common residential
three-wire drop from a utility pole transformer. The higher voltage
service intended for appliances with motors (washers, central air
blowers, etc.). In general, even with 40 year old USA residences
(such as mine) wired to the National Electric Code, 115 VAC three-
contact outlets in a particular room will generally be on the same
"phase" or side of the power drop. That's not an absolute since
this residence has two rooms with outlets split between the two
"phases."

At the time this residence was built (approximately 1962), the
Los Angeles electrical code required metal conduit carrying all
AC power wiring, a separate ground connection for the conduit.
All but one outlet was properly wired according to NEC when I
moved in. I took the time to test ALL outlets then and to make
a little diagram for reference to the numbered circuit breakers
just behind the drop box. Such testers are easy to make, even
easier to buy at do-it-yourself stores. Such basic information on

a residence will come in handy later and can provide at least one item of positive assurance that everything is according to code.

On making half of one room a workshop, I found that there still existed AC potentials between tube-based equipment that had internal transformers. Weak, but feelable potentials between equipment cases. Not comfortable. Easily measured with a hand-held Voltmeter. The cause seemed to be "extra" capacitors in a few, connected between the neutral AC input line and case/chassis physical ground. One one Heathkit, it could have been from the supplied transformer's primary-to-secondary winding coupling. All the equipment was strapped to the same conduit ground, including the soldering iron metal holders and a couple of aluminum plates (added later) that are on the workbench "wiring and building" surface.

None of the potentials between equipments was considered "fatal" since a loading of only 100 KOhms between them dropped the AC potentials to a volt or so. That's a relatively easy task to do with a handheld VOM and is recommended now with a greater use of much-higher-impedance CMOS and FET semiconductors now than four decades ago. Most such semiconductors have built-in ESD protection now but the extra effort reduces the potential negatives on one's wallet. :-)

If you don't know the circuit of the switcher (or can't open the structure to trace it out), just set it up in the same location with load(s) within specified range, and start measuring potentials between it and whatever else you have with a VOM, preferably a DVM with frequency response to the top of the AF range or beyond. You can use a high value loading resistor across the VM if you like...such gives a rough idea of the amount of AC current possible through whatever is the coupling device. Such couplings usually have a rather high "source impedance" so the AC current can be quite small (in the microampere range).

I'd like to have a definitive answer on switching supplies myself. In the approximate two decades of their common use in computers and consumer electronics, there is a wide variety of circuitry and basic architecture. It's not standard, nor does it have to be. It's an evolving thing that will, probably, eventually produce a "standard" arrangement. Not yet. My computer's switching supply (5 years old) is of a different arrangement than my wife's computer PS even though they were system-packaged by the same company a year and a half later. The switching supply box of my ancient Apple][(circa 1980) is quite a bit different in circuit arrangement. The switcher in my Philips 'scope is quite a bit different than all of them.

Bottom line is that you need to define your own "isolation"
needs. Consumer equipment as built already has some
isolation and some specs thereto. You can measure
potentials between your equipment and any switcher with
a VOM or DVM...but probably not from 50 KHz and upward
(which needs a wideband differential-input oscilloscope). If
in doubt, conventional isolation transformers are still available
from Mouser, Digi-Key, Allied, Newark, etc., catalog listings
for both North American and European AC power mains.
If you are worried about HF dribbling out the mains line from
a switcher, add a lowpass filter on that input. Those can
also be purchased...but be careful on the connections of
such a filter.

Len Anderson
retired (from regular hours) electronic engineer person

2704. Re: What's With The Quicktime!! Was: LCD CRO Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 21:11:59 UTC
From: ihatespam@freemail.com.au
Message-ID: <30571888.0304091311.89689bb@posting.google.com>
Source record: 36207
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew

antispam <nospam@please.net> wrote in message news:<3E93BB29.1050708@please.net>...
> Hey Guys! Who keeps embedding Quicktime in the newgroup postings!? I thought
> netiquette dictated that newsgroups were text-only!

That shits me to tears, hence my move to google groups. Agent is a
good reader which will break up those fuckin' annoying messages into
text and html attachments.

2705. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 21:26:37 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <f7499vs68enaere48lut7fh3qmu7g86hge@4ax.com>
Source record: 36208

Try this site...

http://www.free-pcb-software.com/html_uk/uk_service_1.htm

Tracy

On Wed, 9 Apr 2003 21:51:49 +0100, Dick <dick@langwang.demon.co.uk>
wrote:

> Sorry for raising old subject but I've managed to wipe the
>answers I saved from last time someone raised the question before I got
>round to downloading.
>
> Can anyone recommend a freeware/shareware/limited edition PCB
>drafting s/w package with the facility to download the finished product
>in a standard format such as jpeg or Paintshop. I don't make many PCBs
>but I'd at least like those I do to look neat - even if these days the
>bits have to come out of my own junk box.
>
> Thanks,

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2706. Re: Suitable sub...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 21:27:44 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <f9499v0erdsv4pv6psh771rseldosl24n3@4ax.com>
Source record: 36210

Thats what I thought...but wasn't really sure...

Tracy

On Wed, 09 Apr 2003 02:08:25 GMT, John Popelish <jpopelish@rica.net>
wrote:

>Tracy Fort wrote:
>>
>> Due to a lack of expertise at reading data sheets....I was wondering
>> if anyone knows if a SJ 723J would be a suitable sub for a LM723
>> regulator
>>
>> I've come across a cache of the SG723J's
>
>It sure looks like the same thing to me.
>
>http://www.microsemi.com/datasheets/SG723.pdf

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2707. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 21:27:50 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e949026$0$140$edfadb0f@dtext02.news.tele.dk>
Source record: 36209

Hello Dick

> Can anyone recommend a freeware/shareware/limited edition PCB
> drafting s/w package with the facility to download the finished product
> in a standard format such as jpeg or Paintshop. I don't make many PCBs
> but I'd at least like those I do to look neat - even if these days the
> bits have to come out of my own junk box.

I think the best for CAD program for homebrew PCB/SCM is CIRCAD.

Download a free version at www.holophase.com

It can save the artwork in BMP format.

Regards Max

2708. Re: Transformer help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 22:48:28 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <lc899vgs1l5roqbe6ek3psnvifp7i0l1b8@4ax.com>
Source record: 36211

On Tue, 08 Apr 2003 20:51:53 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Tue, 08 Apr 2003 23:23:31 GMT, "Shephed" <roll1up@smkey.com> wrote:
>
>|Hello all,
>|I'm putting together a single 6T9 tube project for a QRP club.
>|
>|In working with an old ARRL article, it's calling for a Stancor PC8401
>|filament transformer.
>|
>|Can someone give me the specs on this transformer and a good source for
>|getting them.
>
>
>Specs yes:
>
>High voltage 235-0-235 @ 40 mA DC.
>
>Rectifier Filament 5.0 VAC @ 2 A
>
>Other Filament 6.3 VAC CT @ 2 A.
>
>Source no:
>
>The above data from a 1961 Stancor catalog (never throw anything away
><g>) so your chance of buying one is nil.
>
>Almost any old radio with a power transformer (non-AC/DC) should yield
>something suitable. This is homebrew after all.

Don't know if it's the same circuit, but there's a 6T9 transmitter
in the 1972 handbook that calls for 470V center tapped @ 40 mA,
and 6.3V @ 2A. Based on this, and if you want to buy a
transformer instead of scrounging one, you could use a Hammond
P-T269JX or P-T269EX. They can be had from www.tubesandmore.com
for about $30 (one's a bit high on the B+ voltage, the other's a
bit low, but either should work fine).

-fb-

(2) 6.3V

2709. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 23:07:58 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnb999ue.1ha.eikelan@ID-77364.user.dfncis.de>
Source record: 36212

John Popelish wrote:
> "Eike Lantzsch, ZP6CGE" wrote:
> >
> > Hi y'all:
> >
> > Has anybody experience with quieting the RFI of an Allen Bradley
> > Variable Frequency Drive for an air conditioning motor?

[snip]
>
> I had some experience with these drives in an industrial situation.
> The biggest bang for the buck was adding a common mode choke very
> close to the drive on the T leads. We started out with a commercial
> unit, but had to design our own with a lot more ferrite core material
> to get the effect we needed. The concept is to have the 3 T leads
> (twisted together) pass through a high permeability ferrite core one
> or more times. We made a core out of 4 stacked 2.5 inch OD, .5 inch
> thick toroids. There may also be some advantage in putting one on the
> AC supply leads (or feeding the AC through a 5%, laminated iron core
> choke), but the noise is mostly radiated from the T leads, since they
> are driven with a fast rise time waveform.
>
> If you want help selecting a core to build your own common mode choke,
> email me.
>
Thank y'all for the good advice. Meanwhile I was able to dig up the AB
manuals for the VFD. They also recommend a common mode RFI filter.
After much googling I was able to find one made by Tyco. I ordered
it from Allied Electronics. Hope it works fine. They promise 56dB
suppression @ 150kHz and 70dB up to 30MHz.
Shielding the cables to the motor shall be something like the last
resort.
I guess I would have more difficulty purchasing the big ferrite cores
than purchasing the filter. I'm in Paraguay (ZP...)

Kind regards and thank you again indeed, Eike

2710. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-09 23:35:40 UTC
From: DrGrok@mungednet.com
Message-ID: <b72afn$84n$1@bob.news.rcn.net>
Source record: 36213

In article <DwdMmwBlfIl+EwL9@langwang.demon.co.uk>, Dick <dick@langwang.demon.co.uk>
wrote:
> Sorry for raising old subject but I've managed to wipe the
>answers I saved from last time someone raised the question before I got
>round to downloading.
>
> Can anyone recommend a freeware/shareware/limited edition PCB
>drafting s/w package with the facility to download the finished product
>in a standard format such as jpeg or Paintshop. I don't make many PCBs
>but I'd at least like those I do to look neat - even if these days the
>bits have to come out of my own junk box.
>
> Thanks,

There is a free program simply called PCB. URL
:
http://bach.ece.jhu.edu/~haceaton/pcb/pcb-1.6.3/doc.ps/pcb.html

It produces output in Postscript format that can be printed on a transparency,
also will produce Gerber files.

Dr. G

2711. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 00:14:43 UTC
From: g3pho@blueyonder.co.uk
Message-ID: <3e988485.6184701@news.blueyonder.co.uk>
Source record: 36214
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Wed, 9 Apr 2003 11:25:58 GMT, Andy Cowley <andy.cowley@uwe.ac.uk>
wrote:

>
>From Ham Fests :-
>
>All the stuff that is no longer available or very expensive new.
>Mostly QRO for linears and ATUs
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

For your M3 (10 watt limit) licence or are you aspiring to a Class in
the near future?

2712. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 00:14:44 UTC
From: g3pho@blueyonder.co.uk
Message-ID: <3e9984b6.6233864@news.blueyonder.co.uk>
Source record: 36215

On 9 Apr 2003 11:18:09 -0500, mcalhoun@ksu.edu (mcalhoun) wrote:

>
>Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
>PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
>NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)
^^^

I preserve my freedom without a gun .. but then I dont need one here
in the UK!

BTW I am not against you owning a gun for the purpose of sport
shooting ... it's just that I am totally opposed to the "right to
carry a gun" lobby.

2713. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 01:24:39 UTC
From: Capoot <rlcap@xprt.net>
Message-ID: <v99hvkb78onncb@corp.supernews.com>
Source record: 36216

These two circuit board fabricators have free pcb software to download:
http://www.pcb123.com
http://www.expresspcb.com
Of course they would like for you too email them the finished layout.
Ray
"Dick" <dick@langwang.demon.co.uk> wrote in message
news:DwdMmwBlfIl+EwL9@langwang.demon.co.uk...
> Sorry for raising old subject but I've managed to wipe the
> answers I saved from last time someone raised the question before I got
> round to downloading.
>
> Can anyone recommend a freeware/shareware/limited edition PCB
> drafting s/w package with the facility to download the finished product
> in a standard format such as jpeg or Paintshop. I don't make many PCBs
> but I'd at least like those I do to look neat - even if these days the
> bits have to come out of my own junk box.
>
> Thanks,
> --
> Dick
> GM0MNL

2714. FA - 4CX250F RF Power Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 05:12:18 UTC
From: Ron N8LMT <n8lmt@arrl.net>
Message-ID: <3e94fbba_2@newsfeed>
Source record: 36217
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

PAIR of AMPEREX 4CX250F RF Power Tubes,
new condition..... no reserve..... see!.....
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3017513251

2715. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 05:30:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RaOeZkB4FQI+EA7D@ifwtech.co.uk>
Source record: 36218

Eike Lantzsch, ZP6CGE wrote:
> I guess I would have more difficulty purchasing the big ferrite cores
>than purchasing the filter. I'm in Paraguay (ZP...)

The ferrite core from the deflection yoke of a scrap TV makes a good HF choke (about 10 turns is usually optimum). It's ugly, but it's available everywhere and it's free.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2716. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 06:15:25 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e950c4f@news.alphalink.com.au>
Source record: 36219
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0304081547.6625eea@posting.google.com...
> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on?

Depends on what you build, but this list is good for QRPers

1. NE602
2. LM386/TDA2822
3. Dual gate MOSFETs
4. FETs (eg MPF102)
5. Transistors (eg 2N2222, 2N3053, 2N4427, etc)
6. PA transistors FET and bipolar (eg IRF510)
7. Toroids (ferrite and iron)
8. Polystyrene or NPO capacitors for VFOs
9. Variable capacitors
10. Trimmer capacitors
11. Vernier reduction drives
12.Crystals (any freq, but esp amateur band)
13. 3.58 MHz ceramic resonators
14. Metal boxes
15. Varactor diodes
16. Germanium diodes
17. 74HC4066
18. Small relays
19. Usual supply of resistors and capacitors
20. PC board material

73, Peter VK3YE

2717. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 06:19:04 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3e950d2a@news.alphalink.com.au>
Source record: 36220
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"mcalhoun" <mcalhoun@ksu.edu> wrote in message
news:b71h41$msc@unix1.cc.ksu.edu...
> >What electronic parts do you stock up on? ....
>
> Simple answer: EVERYTHING!
> And then add some more!
>
> After all, doesn't s/he who dies owning the biggest junque box win? :-)

Almost. S/he who gives away the most junk wins ;)

And it's not like options trading - you need to actually have the junk to be
able to give it!

Peter

2718. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 06:31:19 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Xc8la.53475$ja4.3458116@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36221
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Those are definites.....also, the TDA1572 radio chips are good, along with ceramic filters, crystal filters, mixers, LO crystals, synthesizer chips, and as mentioned in the last post, those NE602s. Those chips make great SSB detectors, along with being ok for mixer service in simple receivers.

Pete

Peter Parker <parkerp@NOSPAMalphalink.com.au> wrote in message news:3e950c4f@news.alphalink.com.au...
>
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0304081547.6625eea@posting.google.com...
> > I posted this thread on the eham HomeBrew and Elmers forums. I want
> > the input of all the experienced homebrewers here.
> >
> > What electronic parts do you stock up on?
>
> Depends on what you build, but this list is good for QRPers
>
> 1. NE602
> 2. LM386/TDA2822
> 3. Dual gate MOSFETs
> 4. FETs (eg MPF102)
> 5. Transistors (eg 2N2222, 2N3053, 2N4427, etc)
> 6. PA transistors FET and bipolar (eg IRF510)
> 7. Toroids (ferrite and iron)
> 8. Polystyrene or NPO capacitors for VFOs
> 9. Variable capacitors
> 10. Trimmer capacitors
> 11. Vernier reduction drives
> 12.Crystals (any freq, but esp amateur band)
> 13. 3.58 MHz ceramic resonators
> 14. Metal boxes
> 15. Varactor diodes
> 16. Germanium diodes
> 17. 74HC4066
> 18. Small relays
> 19. Usual supply of resistors and capacitors
> 20. PC board material
>
> 73, Peter VK3YE
>
>

>

2719. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 07:40:23 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e951fe6$0$30726$626a54ce@news.free.fr>
Source record: 36222

This is the new Target homepage:

http://www.ibfriedrich.com/

73 de F8BOE Olivier ...-.-

2720. 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 09:11:08 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E95352C.8020900@wanadoo.fr>
Source record: 36223

Hello dears Om
i am searching about homebrewing a 2 m SSB phasing , have an idea ?
thinks in advance
Serge /f5jtm

2721. a idea for a 9mhz ladder filter hombrewing ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 10:13:57 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E9543E5.1090204@wanadoo.fr>
Source record: 36224

Hello
i want make a hf tx ssb but commercials filters are not cheap , an idea
for a 9 mhz homebrewing filter ?
i had read some publications but not on 9 mhz
73's
Serge /f5jtm

2722. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 12:22:03 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <hw6dnTSUBv5-_wijXTWcqA@comcast.com>
Source record: 36225

You can take your ExpressPCB image, capture it with PrintScreen, paste it into MSPaint and remove the background by hand with the eraser or pencil function

"Capoot" <rlcap@xprt.net> wrote in message
news:v99hvkb78onncb@corp.supernews.com...
> These two circuit board fabricators have free pcb software to download:
> http://www.pcb123.com
> http://www.expresspcb.com
> Of course they would like for you too email them the finished layout.
> Ray
> "Dick" <dick@langwang.demon.co.uk> wrote in message
> news:DwdMmwBlfIl+EwL9@langwang.demon.co.uk...
> > Sorry for raising old subject but I've managed to wipe the
> > answers I saved from last time someone raised the question before I got
> > round to downloading.
> >
> > Can anyone recommend a freeware/shareware/limited edition PCB
> > drafting s/w package with the facility to download the finished product
> > in a standard format such as jpeg or Paintshop. I don't make many PCBs
> > but I'd at least like those I do to look neat - even if these days the
> > bits have to come out of my own junk box.
> >
> > Thanks,
> > --
> > Dick
> > GM0MNL
>
>

2723. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 12:34:46 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3E956638.7ECF4E8B@uwe.ac.uk>
Source record: 36226
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

g3pho@blueyonder.co.uk wrote:
>
> On Wed, 9 Apr 2003 11:25:58 GMT, Andy Cowley <andy.cowley@uwe.ac.uk>
> wrote:
>
> >
> >From Ham Fests :-
> >
> >All the stuff that is no longer available or very expensive new.
> >Mostly QRO for linears and ATUs
> ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
>
> For your M3 (10 watt limit) licence or are you aspiring to a Class in
> the near future?

M1EBV

Andy

2724. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 12:45:14 UTC
From: Gavin Jacobs <notasnoball@inhell.com>
Message-ID: <uHdla.29354$de.3335209@news2.telusplanet.net>
Source record: 36227

Also have a look at the free version of Eagle, at:
http://www.cadsoftusa.com

It does schematic capture and layout.

"Dick" <dick@langwang.demon.co.uk> wrote in message
news:DwdMmwBlfIl+EwL9@langwang.demon.co.uk...
> Sorry for raising old subject but I've managed to wipe the
> answers I saved from last time someone raised the question before I got
> round to downloading.
>
> Can anyone recommend a freeware/shareware/limited edition PCB
> drafting s/w package with the facility to download the finished product
> in a standard format such as jpeg or Paintshop. I don't make many PCBs
> but I'd at least like those I do to look neat - even if these days the
> bits have to come out of my own junk box.
>
> Thanks,
> --
> Dick
> GM0MNL

2725. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 13:35:42 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e9573c6_3@news1.prserv.net>
Source record: 36228
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Simple:

Draw $10,999 out of the bank. Use the first $1K to buy a round trip ticket to Tokyo. Convert $9,999 to Yen. Hop the next flight to Tokyo. From Narita, catch the bus to the downtown air terminal. Then the subway to Akhiabara. Buy 3 or 4 of everything you see until you run out of Yen. Use your credit card to FedEx it all home. Return by the reverse route. Have fun.
--
Crazy George
Remove NO and SPAM from return address

2726. MCL SBL-1-55 mixer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 15:17:44 UTC
From: Psychlor <psychlor@yucom.be>
Message-ID: <5m2b9v8dbiiadknmqqhudvpo08n1e35p9f@4ax.com>
Source record: 36229

Hello all,

I have a mixer that has printed:

MCL
SBL-1-55

Can this mixer be used in schematics for an SBL-1? Or has the 55 part
an important meaning that cannot be overlooked?

Thanks in advance,

Philip

2727. Re: Interference from Allen Bradley Variable Frequency Drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 15:43:33 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnb9b495.422.eikelan@ID-77364.user.dfncis.de>
Source record: 36236

Ian White, G3SEK wrote:
> Eike Lantzsch, ZP6CGE wrote:
> > I guess I would have more difficulty purchasing the big ferrite cores
> >than purchasing the filter. I'm in Paraguay (ZP...)
>
> The ferrite core from the deflection yoke of a scrap TV makes a good HF
> choke (about 10 turns is usually optimum). It's ugly, but it's available
> everywhere and it's free.
>
Good point!
Threw one tube away yesterday together with the yoke - duh!

Kind regards, Eike

2728. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 16:04:07 UTC
From: Norm Kingston <normclar@Execulink.com>
Message-ID: <v9b5gn29s0q427@corp.supernews.com>
Source record: 36230
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I agree with Crazy George but do it in Singapore. Cost less, the foods
better and everyone speaks English.
Norm
"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e9573c6_3@news1.prserv.net...
> Simple:
>
> Draw $10,999 out of the bank. Use the first $1K to buy a round trip
ticket
> to Tokyo. Convert $9,999 to Yen. Hop the next flight to Tokyo. From
> Narita, catch the bus to the downtown air terminal. Then the subway to
> Akhiabara. Buy 3 or 4 of everything you see until you run out of Yen.
Use
> your credit card to FedEx it all home. Return by the reverse route. Have
> fun.
> --
> Crazy George
> Remove NO and SPAM from return address
>
>

2729. WTB - RF Amp Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 16:36:41 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <b749fe$5fm$1@ctb-nnrp2.saix.net>
Source record: 36234

I'm looking for 3 Motorola MRF454 transistors. The so-called "Authorised dealer" inthis country refuses to simply sell them as is - they insist on doing the installation job. At a hugely inflated fee of course!

73
Roger ZR3RC

2730. Re: TS430S REPAIR HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 16:51:55 UTC
From: ricknj101@hotmail.com
Message-ID: <3e95a034.184945355@news.optonline.net>
Source record: 36231

I've heard that 430s have a problem with bad connections on the PCBs.
Can't remember if it is the plated through holes maybe?
Anyway, it sounds like a connection somewhere is not too solid. See
if there are mounting screws for the boards that could be tightened,
wiggle connectors (take them off and push back on). If this doesn't
work, then take a pencil eraser end and gently push components on the
board feeding the display, looking for where the intermittant
connection is.

Rick K2XT

2731. Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 17:07:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7488g$b2b7a$1@ID-150848.news.dfncis.de>
Source record: 36232
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Is there a free program available that allows one to make one's own panel meter scale? TIA. Rich.

2732. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 17:25:07 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <b749d9$ats7l$1@ID-140397.news.dfncis.de>
Source record: 36233
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b7488g$b2b7a$1@ID-150848.news.dfncis.de...
> Is there a free program available that allows one to make one's own
> panel meter scale? TIA. Rich.

http://mywebpages.comcast.net/tonne/software.html
--
73
Brian
G8OSN
www.g8osn.org.uk

2733. Re: Audio Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 17:29:02 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <b749ud$5of$1@ctb-nnrp2.saix.net>
Source record: 36235

Try MFJ www.mfjenterprises.com

Roger ZR3RC

"Phil" <kd7zd@yahoo.com> wrote in message
news:9fa88e3b.0304081558.1f6f5698@posting.google.com...
> I have a need for about a 2 watt audio amp for a project. Can anyone
> tell me where I might find a kit or something?
>
> Phil
> KD7ZD

2734. Re: Audio Amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 19:36:45 UTC
From: ricknj101@hotmail.com
Message-ID: <3e95c6da.194841122@news.optonline.net>
Source record: 36237

>I have a need for about a 2 watt audio amp for a project. Can anyone
>tell me where I might find a kit or something?

Go on ebay, search for "audio amp" or LM386 or LM380.
You will find a guy selling a kit of something like 10 ICs and 1200
surface mount parts, for around $8-10. He is in there all the time,
must have a large supply of parts.
I just put together an LM380 audio amp yesterday, dead bug style on a
PCB, works great. I'm going to mount it in my Drake R4C to lower the
heat, and current drawn by the archaic audio amp in it.

Rick

2735. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 19:55:00 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <zsicnWzq_pqWUAijXTWcqA@comcast.com>
Source record: 36238
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Don't forget, you can always capture an image (of a meter which you like) using PrtScr (saves to clipboard), open it up in MSPaint using "Edit" the "Paste" and play with the image there, saving it as a bitmap file. I did this with a Keithley Meter I liked.

"Brian Reay" <brian.reay@bigfoot.com> wrote in message news:b749d9$ats7l$1@ID-140397.news.dfncis.de...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b7488g$b2b7a$1@ID-150848.news.dfncis.de...
> > Is there a free program available that allows one to make one's own
> > panel meter scale? TIA. Rich.
>
>
> http://mywebpages.comcast.net/tonne/software.html
> --
> 73
> Brian
> G8OSN
> www.g8osn.org.uk
>
>

2736. Re: WTB - RF Amp Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 20:46:07 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <jKkla.21830$cO3.1647915@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36239

www.rfparts.com

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Roger Conroy" <rogerconroy@nospam.hotmail.com> wrote in message
news:b749fe$5fm$1@ctb-nnrp2.saix.net...
> I'm looking for 3 Motorola MRF454 transistors. The so-called "Authorised
> dealer" inthis country refuses to simply sell them as is - they insist on
> doing the installation job. At a hugely inflated fee of course!
>
> 73
> Roger ZR3RC
>
>

2737. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 21:07:04 UTC
From: Wim Ton <wimton@blueyonder.co.uk>
Message-ID: <6Zkla.218$eW1.168@news-binary.blueyonder.co.uk>
Source record: 36240

> There is a free program simply called PCB. URL
> :
> http://bach.ece.jhu.edu/~haceaton/pcb/pcb-1.6.3/doc.ps/pcb.html
>
> It produces output in Postscript format that can be printed on a
transparency,

Reasonable userfriendly.
The Postscript files are messy for very fine SMD work (0.65 mm and finer).
Might be fine for coarser resolutions

Wim

2738. Re: A different AT power-supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 21:33:02 UTC
From: Sylvan Butler <Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnb9booe.3p6.Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 36241

On 09 Apr 2003 17:11:15 GMT, Troglodite <troglodite@aol.com> wrote:
> ground conductor on a 3-wire cord is indeed usually connected to the chassis of
> your typical computer power supply. The neutral, however is not, and therefore
> EVEN IF YOUR OUTLETS ARE WIRED INCORRECTLY, as long as the ground pin maintains
> its integrity it is impossible to have a potential difference between two
> computer chassis. If the ground is unconnected or defeated, you still would not
> be able to have lethal potentials between chassis, but there could be
> considerable leakage through the line filtering networks.

Imagine a house where the original two-wire outlets had been
replaced by grounded outlets, where the ground screw was simply
jumpered to the "natural" wire. Imagine also that polarity had not
been well observed between fusebox and outlets so that sometimes the
"natural" wire was hot.

BTDT.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

2739. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 22:26:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b74qua$b5v98$1@ID-150848.news.dfncis.de>
Source record: 36242
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Brian Reay" <brian.reay@bigfoot.com> wrote in message
news:b749d9$ats7l$1@ID-140397.news.dfncis.de...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b7488g$b2b7a$1@ID-150848.news.dfncis.de...
> > Is there a free program available that allows one to make one's own
> > panel meter scale? TIA. Rich.
>
>
> http://mywebpages.comcast.net/tonne/software.html
> --
> 73
> Brian
> G8OSN
> www.g8osn.org.uk

Thanks. I think I could have a problem printing. Looks complicated on
that
score.

2740. Re: PCB Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 23:51:11 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E96036F.4090109@bellsouth.net>
Source record: 36243

Dick wrote:
> Sorry for raising old subject but I've managed to wipe the
> answers I saved from last time someone raised the question before I got
> round to downloading.
>
> Can anyone recommend a freeware/shareware/limited edition PCB
> drafting s/w package with the facility to download the finished product
> in a standard format such as jpeg or Paintshop. I don't make many PCBs
> but I'd at least like those I do to look neat - even if these days the
> bits have to come out of my own junk box.
>
> Thanks,

Any I should push the Linux solution, Geda Gschem. Debian and Redhat packages
available. This one also has a nice utility for making your own parts libaries
for parts not included in the one supplied. If you download this one you will
notice there are also some tube symbols in there for an AA5 tube set. I contributed
those.

2741. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-10 23:56:28 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9604AC.6020209@bellsouth.net>
Source record: 36244
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

> I can't go by the dump without hacking out the power supply of a PC! Some
> people go to the dump to deposit, others to withdraw.

As I kid I used to ride my bicycle around Brooklyn on trash days with a pair of Dyke and gas plyers plus a few screwdrivers in my pockets looking for junker
tv's thrown out. I would carry the chassis home, or just yank out the more valuable
parts. I had to bring along a good shopping bag to carry on the handle bars, it got
filled with tubes, the rest of the junk in a box strapped to the rear fender.

2742. FA: Lot of 63 NOS miniature tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 00:12:32 UTC
From: ethan <read_message@to.reply>
Message-ID: <QLnla.437514$sf5.758618@rwcrnsc52.ops.asp.att.net>
Source record: 36245
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Lot of 63 NOS miniature tubes, no reserve
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2169787019

2743. FA: several 829B + 832A tubes NR

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 00:13:15 UTC
From: ethan <read_message@to.reply>
Message-ID: <vMnla.138258$OV.229037@rwcrnsc54>
Source record: 36246
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

No reserve
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=7275&item=2169787594

2744. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 02:26:20 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <b7594c$l7$1@xuxa.iecc.com>
Source record: 36147
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

In article <hfga9vssslsgfo5nvmiiinta7edig7fui7@4ax.com>,
mazeti@mclink.it mentioned...
> It is possible to share 1 wire in N balanced lines to reduce the total
> wires ?
> I want distribute 4-5 different audio channels (possibly stereo) in some
> rooms, selecting by a switch then amplifing them locally in an indipendent
> manner.
> I saw a commercial device that use 6 unshielded wires for 5 mono channels,
> plus a pair for local switch/amplifier power supply, do you think it works
> on that way ?
> I read about "12Vpp signals" on the datasheet.
> Thanks

Here is the way it should be done (see URL below). However I don't know
of a source for the coils, because just about all of these circuits are
no longer used, having been replaced with digital circuits such as T1,
etc. On second thought, the coils may be available for radio stations
which use a phone line for their studio to transmitter link. I'm
xposting to 3 other ngs to see if anyone there might know.

http://www.ptialaska.net/~jsteven2/tel/17-3.htm

> MazE
> --

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

2745. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 03:58:15 UTC
From: fmmck@aol.com
Message-ID: <20030410235815.28272.00000399@mb-ft.aol.com>
Source record: 36148

<< Actually, the equalizing resistors is still a good idea, and still very much needed with the 1N400X series. All ratings are going to vary a bit, and vary even more if you mix manufactures of the diodes within your stack. I have never ran the equalizing capacitors, as they seem to cause problems more often than curing them, >>

Gudmundur-

Please forgive my saying this, but your statement is nonsense. I do not believe equalizing resistors are a good idea. In fact, many resistors that may have been used in such an application were themselves rated at a lower voltage (dielectric, not power) than the diodes they were across.

Consider a slowly rising reverse voltage. As soon as the lowest-voltage diode reaches its breakdown voltage, that diode's increase stops until the highest-voltage diode has reached its breakdown voltage. At that point you've reached the limit and damage can occur. Before that point, power dissipation in any one diode is limited by the leakage current. Since some diodes may have higher-than-rated reverse breakdown voltages, the total voltage can be higher than expected when the limit is reached.

Now, consider a fast-rising transient reverse voltage. It will immediately divide among the diodes in inverse proportion to each diode's capacitance. There is a good chance that some diode will reach its reverse limit long before the others. However, its current is not just leakage, but is now determined by the capacitive reactance of the series diodes. If the diode is not able to withstand the resulting energy pulse, it will fail. With a diode's failure, the voltage across each remaining good diode is increased, and a cascade failure of all diodes might occur.

This is my case for equalizing capacitors. A high voltage ceramic capacitor bridging each diode will prevent any one diode from reaching its reverse limit until the total rated voltage has been reached. What size capacitor? I would consider using the largest practical value that would not result in wasted power or self-heating at the power frequency (eg. 20, 50, 60, 400 Hz).

For a switching power supply with a somewhat higher frequency, extra capacitance might easily upset operation of the circuit. I think it would be better in that case, to pay a little extra and use the highest voltage diodes available to start with, and then carefully take any equalizing capacitors into account in the switching circuit's design.

73, Fred, K4DII

2746. DYNAMARK front panel artwork developer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 06:21:52 UTC
From: robinson@srsuna.shlrc.mq.edu.au
Message-ID: <b75mu0$a7u$1@sunb.ocs.mq.edu.au>
Source record: 36149

Hi,

I have some DYNAMARK material but I need some developer or
need to know what chemical is actually in it.
As you may know, this stuff is the same as SCOTCHCAL
and uses UV to make the professional looking front panels.

--
Regards
Ray
vk2ilv

2747. Re: MCL SBL-1-55 mixer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 06:53:09 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <pDtla.55101$ja4.3564912@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36150

The 55 suffix probably means that it has been screened for a customer. I would give them a call at 800 654-7949, and ask for one of their application engineers. Feel free to use me for a reference; I know those folks pretty well.
Just tell them, the fellow who used to work for Collins, and they will know who you talking about.

Pete Gianakopoulos KE9OA

Psychlor <psychlor@yucom.be> wrote in message news:5m2b9v8dbiiadknmqqhudvpo08n1e35p9f@4ax.com...
> Hello all,
>
> I have a mixer that has printed:
>
> MCL
> SBL-1-55
>
> Can this mixer be used in schematics for an SBL-1? Or has the 55 part
> an important meaning that cannot be overlooked?
>
> Thanks in advance,
>
> Philip

2748. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 09:06:56 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <Qzvla.3189$8g5.43077@news2.e.nsc.no>
Source record: 36151
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Check out WB8RCR's page with his Dial and Panels program. I have used Panel several times and it prints to any printer under Windows. It can also be compiled for Linux. See

http://www.hfradio.org/wb8rcr/

Sverre, LA3ZA

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b74qua$b5v98$1@ID-150848.news.dfncis.de...
>> >
> > http://mywebpages.comcast.net/tonne/software.html
> > --
>
> Thanks. I think I could have a problem printing. Looks complicated on
> that
> score.
>

2749. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 10:16:35 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <qLwla.1021$5Z2.49048@newsfep1-win.server.ntli.net>
Source record: 36152
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

> Is there a free program available that allows one to make one's own
> panel meter scale? TIA. Rich.
==========
Yes there is a free prog : 'Arbitrary Scales 20000' , by Martin Trump ,
martin@wmeadow.demon.co.uk

Frank gm0csz.kn6wh@ntlworld.com

2750. PC PowerSupply de W7ZFB

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 15:37:21 UTC
From: msix@oldplato.nmia.com
Message-ID: <RiBla.9803$c42.3367@fe01.atl2.webusenet.com>
Source record: 36153

I modified a couple of PC PSs per the vk4ba
web page to see if it worked as advertised.
So far, so good. 13.8V regulated on the 10A rectifier.
I see how to move the 13.8V ckt to the 40A rectifier.

No luck so far moving the V/I protection from the 5V line
to the 13.8V line, if this is the right way to say it?

Each PS is different in this regard and I don't find
a straitforward way to do this.

I found I could disable the -5V OK but not the -12V line.
-12V appears to bias two bipolars that work with the LM339
to drive pin4 of the controller chip from near 0 to 4V in
case of a fault. Not clear how to change this to sense
faults on the 13.8V line. The web page treats this for
specific PS models but none I have.
I don't mind digging in when I have a workable mod but
no point when I don't know what I'm doing :)

Perhaps someone has found a straitforward way to do this
that fits most or maybe even all PSs?
TIA John

2751. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 16:36:49 UTC
From: Skipp <frankiegoestohollywoodbandmovie@yahoo.com>
Message-ID: <b76qv1huo1@woodrow.ucdavis.edu>
Source record: 36154
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Michael,

Most of the people reading your ad feel the price is about $15 too much.

cheers
skipp

: In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
: For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm selling
: it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester
: where 5000 umhos is the miniman acceptable level. Tube has no shorts. $25
: which includes shipping in the contanintal USA.

: Michael Feldt
: feldtm@iquest.net
: www.indianaradios.com

2752. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 16:54:55 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <b76s0v$c83$1@xuxa.iecc.com>
Source record: 36155
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

Watson "Ammonium Chloride" Name <alondra101@hotmail.com> wrote:
>In article <hfga9vssslsgfo5nvmiiinta7edig7fui7@4ax.com>,
>mazeti@mclink.it mentioned...
>> It is possible to share 1 wire in N balanced lines to reduce the total
>> wires ?
>> I want distribute 4-5 different audio channels (possibly stereo) in some
>> rooms, selecting by a switch then amplifing them locally in an indipendent
>> manner.
>> I saw a commercial device that use 6 unshielded wires for 5 mono channels,
>> plus a pair for local switch/amplifier power supply, do you think it works
>> on that way ?
>> I read about "12Vpp signals" on the datasheet.
>> Thanks
>
>Here is the way it should be done (see URL below). However I don't know
>of a source for the coils, because just about all of these circuits are
>no longer used, having been replaced with digital circuits such as T1,
>etc. On second thought, the coils may be available for radio stations
>which use a phone line for their studio to transmitter link. I'm
>xposting to 3 other ngs to see if anyone there might know.
>
>http://www.ptialaska.net/~jsteven2/tel/17-3.htm

Phantom circuits and repeat coils are wonderfully fun things to
play with. They make a lot of sense if you have a pair of
leased lines and need one more. Or if you own the cable and
would have to install a new 25 pair cable for a few miles.

Repeat coils are actually very commonly available, except they
will be called "hybrid transformer" instead, and they'll be much
smaller than the coils discussed in the URL (which were designed
in the 1930's).

But between rooms? Running more cable is a *lot* less expensive
and less trouble than trying to multiplex multiple channels.
And if you do have an application where the distance is great
enough to be worth the effort, digital multiplexing would be
much preferred.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2753. Re: PC PowerSupply de W7ZFB

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 21:43:14 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E9736F2.21C7EB16@osite.com.br>
Source record: 36156

msix@oldplato.nmia.com wrote:
>
> Perhaps someone has found a straitforward way to do this
> that fits most or maybe even all PSs?
> TIA John

John, this is not as good as the one you mention, but it worked, despite the said noise.
First you remove the +5V reference, tracing backwards from the output until you find a small inductor or jumper (remove this). Then you derive the +5V from the +13.8V line, putting a 8.2V zener (stripe to the 12V side), then a regular diode to the +5V. in paralell with the diodes, a 100u electrolitic cap with the - to the +5V.

I did not test this when TX, but the page I saw claims that it works FB to power his repeater for 7 hr, then thermal shutdown...
--
Paulo E.P. Marcondes
pepm@osite.com.br

2754. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-11 23:59:18 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E9756E3.1EB97528@bellatlantic.net>
Source record: 36157
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
>
> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on? I have noticed in building
> a few projects and especially from looking at the designs of many more
> that any decent homebrewer will use certain parts on a regular basis.
> I believe that any experienced homebrewer has a substantial inventory
> of common parts and makes sure to stock up when either ordering other
> items or when attending hamfests. It's frustrating to lack a certain
> critical part, and many of them are not available at Radio Shack.
> (Come on, try to buy a Germanium diode or SMA connectors at Radio
> Shack.) Every order to Digi-Key or other online/mail-order vendors
> will have shipping charges added on. There are also parts that are
> available at Radio Shack but at exorbitant prices compared to Digi-Key
> and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to
> tell me that these are rarely used and that no homebrewer stocks up on
> these.)
>
> So I am compiling a list of items that any homebrewer should stock up
> on. Please excuse the mis-numbering, as it would take too long to fix
> everything. Yes, I know that you can't have every part possible.
> However, certain items are used on not one project but many, many
> projects. For example,
>
> General items:
> 1. DC jacks
> 2. DC connectors
> 1. LM3914 display driver ICs
> 2. LM3915 display driver ICs
> 3. 1N34A germanium diodes
> 4. Zener diodes
> 5. 1/4" LED holders: available at Radio Shack
> 6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
> 7. 9V battery holders: available at Radio Shack
> 8. Nylon binding posts: exorbitant prices at Radio Shack
> 9. Chasses (metal and non-metal): available at Radio Shack, but more
> selection and better prices elsewhere
> 10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
> 11. LM741 IC amplifiers: exorbitant prices at Radio Shack
> 12. .001uF capacitors: available at Radio Shack, but not at the best
> prices

> 13. .01uF capacitors: ditto
> 14. .1uF capacitors: ditto
> 15. Electrolytic and tantalum capacitors: ditto
> 16. Mica capacitors: ditto
> 17. IC sockets
> 15. LM317 or other voltage regulators: available at Radio Shack at
> high prices
> 16. Switches: available at Radio Shack
> 17. Circuit boards: available at Radio Shack
> 18. 2N2222As: available at Radio Shack at high prices
> 19. 2N3904s: available at Radio Shack at high prices
> 20. 555 timer chips: available at Radio Shack at exorbitant prices
> 21. 2N3906s
> 22. 2N2907s
> 23. Shrink wrap (for soldering wires onto LEDs): also available at
> Radio Shack and Home Depot
> 24. Solder: ditto
> 25. Solder flux: ditto
> 26. #30-gauge wire wrap wire (for wire wrap projects or RF
> transformers if distributed capacitance is an issue and you don't like
> magnet wire): available at Radio Shack
> 27. 1/2-W Resistors: available at Radio Shack
> 28. 1N914/1N4148 diodes: available at Radio Shack
> 29. #6-32 nuts and bolts for mounting circuits: available at Home
> Depot as well as Radio Shack
> 30. Potentiometers
> 31. Knobs
> 32. 2N2219 and 2N2905???
> 33. MPF102/2N3819 or similar FETs???
> 34. 2N3055 or other power transistors???
> 35. LM723 for power supplies???
> 36. Assorted powdered iron cores T- 37/50 - 2/6 ???
> 37. PCB material ???
> 38. BNC connectors/jacks
>
> Audio items:
> 1. LM386 audio amp
> 2. Assorted audio connectors (RCA, 1/8" phone plugs)
> 3. 5532 op amps
> 4. Complementary output transistors that can handle some power
>
> RF items:
> 1. FT50-43 ferrite toroid cores: useful for many, many RF projects
> 2. #73 ferrite beads for connecting RF and DC grounds
> 3. SO-239 jacks: available at Radio Shack at higher prices
> 4. PL-259s (make sure to get the right kind for the cable): ditto
> 5. SMA connectors
> 6. RG-58 coax for jumpers: exorbitant prices at Radio Shack
> 7. Lower loss coax
> 8. Mixers (for homebrewing transmitters and receivers)

> 9. 2N3563/MSP-H10/2N5179/BFR-96 or equivalent (for VHF)
> 10. 2N4427/2N3866 1 watt VHF finals (for homebrewing transmitters and
> receivers)
> 11. 1 - 10pf piston trimmers (vhf) ???
> 12. trim caps about 80pf max (hf) ???
> 13. IF transformers: 455 kHz and 10.7 MHz (can be
> rewound for other frequencies) ???
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

The first stuff you need is more mundane, and more important, because you'll use it in almost every project. 1) Hook up wire. 2) PC or perf boards. 3) You need to add lockwashers to your item #29 (6-32 hardware)

Next in order should be the makings of simple powers supplies for projects - Transformers/wallwarts, bridge rectifiers - and you already mentioned linear regulator chips.

After that, trash most of the list, until you know where your interest takes you. Meanwhile scrounge stuff out of electronic items that get thrown out. People leave TV's, VCR's, microwave ovens, etc. at the curb. Take the useable parts - line cords, hardware, switches, components, motors, etc.

2755. Re: a idea for a 9mhz ladder filter hombrewing ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 00:11:49 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304111611.6823f23@posting.google.com>
Source record: 36158

Serge <poissondanlo@wanadoo.fr> wrote in message news:<3E9543E5.1090204@wanadoo.fr>...
> Hello
> i want make a hf tx ssb but commercials filters are not cheap , an idea
> for a 9 mhz homebrewing filter ?
> i had read some publications but not on 9 mhz
> 73's
> Serge /f5jtm

Try a web search for "cohn crystal filter" or even just "cohn filter".
You should get many hits. I know that a lot of them may talk about
building a filter for a specific frequency, but you should be able to
move it to a different frequency by following the recipes/instructions
that many of the articles give. I believe you can also find helpful
software at http://www.aade.com/filter.htm. You can download it for
evaluation, and it is inexpensive to buy. There are articles, too, on
simple crystal tester circuits to help sort the crystals.

Cheers,
Tom

2756. Re: a idea for a 9mhz ladder filter hombrewing ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 00:29:18 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3E975E09.4030909@bellatlantic.net>
Source record: 36159

> Serge <poissondanlo@wanadoo.fr> wrote in message news:<3E9543E5.1090204@wanadoo.fr>...
>
>>Hello
>>i want make a hf tx ssb but commercials filters are not cheap , an idea
>>for a 9 mhz homebrewing filter ?
>>i had read some publications but not on 9 mhz
>>73's
>>Serge /f5jtm
>>
>

Try http://www.gqrp.com/
They have some filters and BFO crystals.

Jim n2go

2757. U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 02:22:00 UTC
From: Steve McDonald <jsm@gulfislands.com>
Message-ID: <v9etfss6trvqcd@corp.supernews.com>
Source record: 36161

Anyone know of a source for this JFET?

VE7SL

2758. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 02:49:08 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <E8Lla.56344$ja4.3654710@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36163

I think this is what you're looking for...
http://www.fairchildsemi.com/pf/J3/J310.html

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Steve McDonald" <jsm@gulfislands.com> wrote in message
news:v9etfss6trvqcd@corp.supernews.com...
> Anyone know of a source for this JFET?
>
> VE7SL
>
>
>
>

2759. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 03:57:35 UTC
From: Joe <joe.amp@NOSPAMverizon.net>
Message-ID: <P8Mla.1222$883.645@nwrdny02.gnilink.net>
Source record: 36164
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Skipp, you expect a NOS NIB GE 6LQ6 for $10.....Nonsense !
Its a bit to low seen em bring $45 other places.
Problem is he's not selling a set.

Dont listen to this nonsense Mike !!
-Joe

"Skipp" <frankiegoestohollywoodbandmovie@yahoo.com> wrote in message
news:b76qv1huo1@woodrow.ucdavis.edu...
> Michael,
>
> Most of the people reading your ad feel the price is about $15 too much.
>
> cheers
> skipp
>
>
> : In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
> : For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm
selling
> : it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester
> : where 5000 umhos is the miniman acceptable level. Tube has no shorts.
$25
> : which includes shipping in the contanintal USA.
>
> : Michael Feldt
> : feldtm@iquest.net
> : www.indianaradios.com
>
>

2760. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 04:11:27 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <PIMla.6799$ij4.639278@twister.southeast.rr.com>
Source record: 36165
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Why would anyone want one 6lq6?
"Skipp" <frankiegoestohollywoodbandmovie@yahoo.com> wrote in message
news:b76qv1huo1@woodrow.ucdavis.edu...
> Michael,
>
> Most of the people reading your ad feel the price is about $15 too much.
>
> cheers
> skipp
>
>
> : In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
> : For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm
selling
> : it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester
> : where 5000 umhos is the miniman acceptable level. Tube has no shorts.
$25
> : which includes shipping in the contanintal USA.
>
> : Michael Feldt
> : feldtm@iquest.net
> : www.indianaradios.com
>
>

2761. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 04:58:22 UTC
From: Joe <joe.amp@NOSPAMverizon.net>
Message-ID: <O1Nla.1393$883.1369@nwrdny02.gnilink.net>
Source record: 36166
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Many TV Sweep Tube Amplifiers can use tubes like the 8950 or 6LQ6/6JE6
labels, Also Drifttronix/Swan's, Homebrewers.

-Joe

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:PlMla.6799$ij4.639278@twister.southeast.rr.com...
> Why would anyone want one 6lq6?
> "Skipp" <frankiegoestohollywoodbandmovie@yahoo.com> wrote in message
> news:b76qv1huo1@woodrow.ucdavis.edu...
> > Michael,
> >
> > Most of the people reading your ad feel the price is about $15 too much.
> >
> > cheers
> > skipp
> >
> >
> > : In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
> > : For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm
> selling
> > : it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube
tester
> > : where 5000 umhos is the miniman acceptable level. Tube has no shorts.
> $25
> > : which includes shipping in the contanintal USA.
> >
> > : Michael Feldt
> > : feldtm@iquest.net
> > : www.indianaradios.com
> >
> >
>
>

2762. 6 New Texas Instruments SN76514 IC's $35 shipped conus

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 05:17:46 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v9etdl66k1on5f@corp.supernews.com>
Source record: 36160
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I have 6 SN76514 mixer IC's that are made my TI. I bought
them from Rochester Electronics about 1 yr ago. I used a
couple to repair an older Icom radio. $35 to usa.

Doug, N4IJ

2763. NEW Heath SB-200 plate transformer, $75.00 shipped conus

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 05:21:25 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v9etkg9sqphva7@corp.supernews.com>
Source record: 36162
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

This is an export transformer - so the voltages are going to be higher than what you want for your SB-200 but would be excellent for homebrew single 3-500 or similar. I think the primary is for 100vac. Cleaning shack.

Doug N4IJ

2764. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 06:14:13 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <H9udnQKrJcNcVgqjXTWcpQ@ctc.net>
Source record: 36169

news:v9etfss6trvqcd@corp.supernews.com...
> Anyone know of a source for this JFET?
>
> VE7SL

If you can use the J310 which is about the same but in a plastic package youcan fine them on e-bay with a buy it now price. I also saw the U version there. Unless you need $ 20 or $ 30 worth of them or the minimum order from some place , it might be beter to get them off e-bay in bunches of 20 or 30 pieces for under $ 10.

2765. Re: a idea for a 9mhz ladder filter hombrewing ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 06:51:16 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E97B764.4050700@wanadoo.fr>
Source record: 36167

Hello Tom and Jim
many thinks for ideas
for design filter , i have RFSIM 99 , very good .
ok for cohn filters and G-qrp , 9 mhz filters are not expensive .
73's
Serge/f5jtm

2766. Re: Hombrewers: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 07:42:11 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0304112342.2ed378d1@posting.google.com>
Source record: 36168
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0304081547.6625eea@posting.google.com>...
> I posted this thread on the eham HomeBrew and Elmers forums. I want
> the input of all the experienced homebrewers here.
>
> What electronic parts do you stock up on? I have noticed in building
> a few projects and especially from looking at the designs of many more
> that any decent homebrewer will use certain parts on a regular basis.
> I believe that any experienced homebrewer has a substantial inventory
> of common parts and makes sure to stock up when either ordering other
> items or when attending hamfests. It's frustrating to lack a certain
> critical part, and many of them are not available at Radio Shack.
> (Come on, try to buy a Germanium diode or SMA connectors at Radio
> Shack.) Every order to Digi-Key or other online/mail-order vendors
> will have shipping charges added on. There are also parts that are
> available at Radio Shack but at exorbitant prices compared to Digi-Key
> and others. (LM741s, LM324s, and SO-239s come to mind. Don't try to
> tell me that these are rarely used and that no homebrewer stocks up on
> these.)
>
> So I am compiling a list of items that any homebrewer should stock up
> on. Please excuse the mis-numbering, as it would take too long to fix
> everything. Yes, I know that you can't have every part possible.
> However, certain items are used on not one project but many, many
> projects. For example,
>
> General items:
> 1. DC jacks
> 2. DC connectors
> 1. LM3914 display driver ICs
> 2. LM3915 display driver ICs
> 3. 1N34A germanium diodes
> 4. Zener diodes
> 5. 1/4" LED holders: available at Radio Shack
> 6. 1/4" LEDs (red, yellow, green): exorbitant prices at Radio Shack
> 7. 9V battery holders: available at Radio Shack
> 8. Nylon binding posts: exorbitant prices at Radio Shack
> 9. Chasses (metal and non-metal): available at Radio Shack, but more
> selection and better prices elsewhere
> 10. LM324/358 IC amplifiers: exorbitant prices at Radio Shack
> 11. LM741 IC amplifiers: exorbitant prices at Radio Shack
> 12. .001uF capacitors: available at Radio Shack, but not at the best
>============

I don't buy anything unless it's something specific I need. I butcher parts from broken down old junk. I have loads and loads of broken down junk. I have loads of much stuff that works, but I never used. About the only parts I ever buy are semiconductors that I can't find in my vast collection of junk. And I only buy what I need at the time. We have local stores here that stock all that stuff, so there is no need for me to. Most all resisters, caps, etc, I pull off circuit boards from broken junk. IE: As an example, I had to dig up a small electrolytic to fix a monitor a while back. Where did I get it? From another broken monitor...I'll throw all these boards in a box, and when I need a part, I just pull them out and look for it. When I find it, I unsolder it and use it. I guess I could unsolder them all ahead of time and organize them, but I don't have time for such time consuming organized sillyness.. :/ I do have a bunch of plastic cabinets with lots of the parts you mention, but I aquired them from someone else who was more organized than I. They were already pre-stocked when I got them. MK

2767. Audio phase-shift network

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 09:58:08 UTC
From: jgboyles@aol.com
Message-ID: <20030412055808.00683.00000927@mb-ch.aol.com>
Source record: 36170

Hi, Anyone have the basic circuitry for an audio phase-shift network for use in a phasing type SSB exciter. What I am interested in is the old B&W Model 350 2Q4. I have the circuits for the modern phase-shift networks, but I have never seen the layout for the older (1950's) networks. The 2Q4 has been briefly discussed here, it is a passive network, wondering if it would be an easier to use.

73 Gary N4AST

2768. Re: Audio phase-shift network

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 12:09:29 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000005a.009f2c29@btinternet.com>
Source record: 36171

Hi,

Pin 1 - 2 : 680pF in series with 487k

Pin 2 - 3 : 430pF in parallel with 770k

Pin 5 - 6 : 680pF in series with 125k

Pin 6 - 7 : 430pF in parallel with 198k

Inputs across 1/5 and 3/7 with the quadrature outputs from 2
and 6.

But you can see for yourself - look at the B&W 51SB on :

http://www.bama.sbc.edu/

Cheers - Joe

2769. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 13:21:33 UTC
From: umarc <umarc@hippogryph.com>
Message-ID: <b793sthec1@xuxa.iecc.com>
Source record: 36172
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

Watson "Ammonium Chloride" Name <alondra101@hotmail.com> writes:

>Here is the way it should be done (see URL below). However I don't know
>of a source for the coils, because just about all of these circuits are
>no longer used, having been replaced with digital circuits such as T1,
>etc. On second thought, the coils may be available for radio stations
>which use a phone line for their studio to transmitter link. I'm
>xposting to 3 other ngs to see if anyone there might know.

Talk to the folks at Jensen Transformers, Inc.

umar

2770. FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 14:33:06 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <CsVla.175824$0g4.5103975@news2.east.cox.net>
Source record: 36173
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3018504921

Thanks!

Larry Keith
KQ4BY

2771. Re: Audio phase-shift network

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 15:35:17 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000005b.015b93c8@btinternet.com>
Source record: 36174

OOPS!

That should be http://bama.sbc.edu/

Cheers - Joe

2772. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 16:13:48 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>
Source record: 36175
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Give it up. Nobody wants this damn thing and you crossposting it to
all of these groups every couple of days is getting annoying.

On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
<ga_boneyard@hotmail.com> wrote:

|Please see:
|
|http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

2773. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 16:18:31 UTC
From: fmmck@aol.com
Message-ID: <20030412121831.19257.00000567@mb-fp.aol.com>
Source record: 36176

<< I know this was the usual practice when 'top hat' type SI rectifiers were used. Many years ago I built a linear supply using 1N4007's and I did parallel each diode with a 470k 1/2 wat resistor and a .001 1000v disk capacitor. I don't know if this was necessary or not, but the supply worked just fine. I also used twice as many diodes as necessary (the transformer
was about 2800-0-2800 and I used 10 diodes in each leg of the fw rectifier). The filter cap used ten 330uf 450v caps in series. >>

Scharkalvin-

If I figured it right, your 2800 VAC has a maximum value of 3959 volts. If the capacitor is charged to that value, the peak reverse voltage on the diode string is twice the maximum, or 7918 volts. Your ten diodes do provide a safety margin, but maybe not twice.

Does anyone know the voltage rating of a half watt resistor? I seem to remember a value of somewhere around 350 volts. I recall that for high value resistors, the voltage rating is reached long before the power rating!

73, Fred, K4DII

2774. Re: Audio phase-shift network

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 17:13:00 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <3E98571C.2030104@alltel.net>
Source record: 36177

IIRC Kazu JF1ozl has one on his web site
http://www.intio.or.jp/jf10zl/

JGBOYLES wrote:
> Hi, Anyone have the basic circuitry for an audio phase-shift network for use
> in a phasing type SSB exciter. What I am interested in is the old B&W Model
> 350 2Q4. I have the circuits for the modern phase-shift networks, but I have
> never seen the layout for the older (1950's) networks. The 2Q4 has been
> briefly discussed here, it is a passive network, wondering if it would be an
> easier to use.
>
> 73 Gary N4AST

2775. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 17:24:38 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb9giuk.gjg.nobody@animas.frontier.net>
Source record: 36178

On Sat, 12 Apr 2003 03:14:13 -0300, Ralph Mowery hath writ:
>
> news:v9etfss6trvqcd@corp.supernews.com...
>> Anyone know of a source for this JFET?
>>
>> VE7SL
>
> If you can use the J310 which is about the same but in a plastic package
> youcan fine them on e-bay with a buy it now price.

Dan's Small Parts: http://www.danssmallpartsandkits.net/ 3/$2.35

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2776. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 17:36:06 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3E984EB9.7070403@bellatlantic.net>
Source record: 36179

Try this guy for the J310. prompt and courteous service :)
Great toroid prices also.

http://partsandkits.com/parts.asp

Satisfied customer,
Jim n2go

2777. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 18:15:18 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <f3mg9vghbgh9vjlrsnk3aoprfpublmfj2m@4ax.com>
Source record: 36180

whats' worse is reading your cross posting whinning!

If you don't like it, then kill filter it....like I'm gonna do to you!

Tracy

On Sat, 12 Apr 2003 09:13:48 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>Give it up. Nobody wants this damn thing and you crossposting it to
>all of these groups every couple of days is getting annoying.
>
>
>On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
><ga_boneyard@hotmail.com> wrote:
>
>|Please see:
>|
>|http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2778. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 20:01:53 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <b79rbh$3n5$1@xuxa.iecc.com>
Source record: 36181
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

umarc <umarc@hippogryph.com> wrote:
>Watson "Ammonium Chloride" Name <alondra101@hotmail.com> writes:
>
>>Here is the way it should be done (see URL below). However I don't know
>>of a source for the coils, because just about all of these circuits are
>>no longer used, having been replaced with digital circuits such as T1,
>>etc. On second thought, the coils may be available for radio stations
>>which use a phone line for their studio to transmitter link. I'm
>>xposting to 3 other ngs to see if anyone there might know.
>
>Talk to the folks at Jensen Transformers, Inc.

Jensen doesn't seem to sell any appropriate hybrid transformers. Or
at least there are not listed on their web page.

Here are examples of the type of transformer required,

<http://www.rhombus-ind.com/datashts/t-31200.pdf>
<http://www.rhombus-ind.com/datashts/t-31204.pdf>
<http://www.filtran.com/filtran/datasheets/7390.pdf>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2779. Plessey SP9131 Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 23:15:27 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3E989ED4.BE485AF5@alma.demon.co.uk>
Source record: 36182
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Has anyone got a datasheet for the obselete Plessey SP9131.

It appears to be a dual divide by 2 device. I am interested in the signal level it needs at various frequencies. It's part of a VCO in a PMR rig which I am changing to work on 4m. As I sweep a voltage to tune the VCO the signal strength varies enough to not drive this chip for all the range. It's an interesting design to have the VCO work at 2x frequency and then divide by 2, but I have no idea what benefit this brings.

regards...

--Gary

2780. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 23:24:48 UTC
From: Steve McDonald <jsm@gulfislands.com>
Message-ID: <v9h7fka99kv9d6@corp.supernews.com>
Source record: 36183

Thanks for all the help guys. I do have several J310s and although they are supposed to be the same, the metal-cased U310 is slightly better.
Thanks again.

2781. WTS: Watkins Johnson receiver module. Great start for homebrew RX.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-12 23:48:22 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <3E98B3C5.8000502@alltel.net>
Source record: 36184

WTS:
Watkins Johnson module. With computer control it's almost an
entire receiver. Good basis for a homebrew project.
Two synthesizers
Two xtal filters
NICE WJ mixers.
$62 includes 48 states shipping. AK HI $65
See photos here
http://edebris.com/catalog2/item/562
Be sure to select a thumbnail and use the resolution and scaling options
so you can see all the good parts. IIRC, first filter is 21.4MHz and
200kHz wide.
-Bob

2782. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 01:17:53 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304121717.5c40467b@posting.google.com>
Source record: 36185

Well, it _especially_ doesn't belong here in r.r.a.h. It looks to me
like he's making these things and putting them out for sale. I don't
mind an occasional one-off posting here for something like this, but
this looks commercial to me.

Cheers,
Tom

Wes Stewart <n7ws@#arrl.net> wrote in message
news:<2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>...
> Give it up. Nobody wants this damn thing and you crossposting it to
> all of these groups every couple of days is getting annoying.
>
>
> On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
> <ga_boneyard@hotmail.com> wrote:
>
> |Please see:
> |
> |http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

2783. Re: Plessey SP9131 Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 11:20:46 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0304130320.5f42a09b@posting.google.com>
Source record: 36186
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Gary,

It's a Dual, 520MHz, ECL D type flip flop.

Input needs to swing -0.31 to -1.11V (with a -0.71V bias).

Output will be 600mV p-p.

CLK1 pin 6, Q1 pin 2, /Q1 pin 3
CLK2 pin 11, Q2 pin 15, /Q2 pin 14

Also see MC10131.

Mark.

Gary Morton <gary@alma.demon.co.uk> wrote in message
news:<3E989ED4.BE485AF5@alma.demon.co.uk>...
> Has anyone got a datasheet for the obselete Plessey SP9131.
>
> It appears to be a dual divide by 2 device. I am interested in the
> signal level it needs at various frequencies. It's part of a VCO in a
> PMR rig which I am changing to work on 4m. As I sweep a voltage to tune
> the VCO the signal strength varies enough to not drive this chip for all
> the range. It's an interesting design to have the VCO work at 2x
> frequency and then divide by 2, but I have no idea what benefit this
> brings.
>
> regards...
>
> --Gary

2784. Re: Audio phase-shift network

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 12:11:15 UTC
From: jgboyles@aol.com
Message-ID: <20030413081115.22051.00000790@mb-fv.aol.com>
Source record: 36187

Thanks to everyone who responded here on the NG and by email. I got exactly what I was looking for.

>Hi, Anyone have the basic circuitry for an audio phase-shift network for use >in a phasing type SSB exciter. What I am interested in is the old B&W Model >350 2Q4.

73 Gary N4AST

2785. Help wtth math...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 12:48:55 UTC
From: Phil Kirchmeier <Ckirch@execpc.com>
Message-ID: <3E995CB6.21947D9@execpc.com>
Source record: 36188

Morning all...I'm building a RF Actuated CW Monitor....The capacators
are marked " 10n".
None are marked pf or uf...I know I should know how to convert but i 'v
been out of school to long....HI HI Thanks for the help...I.m getting
back on the air after being off for some years...
Retired now and have lots of time for hamming...
Best of 73'
de wb9kzi
Phil

2786. Re: Help wtth math...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 13:50:08 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E996B10.1030004@ay.com.au>
Source record: 36189

Phil Kirchmeier wrote:
> Morning all...I'm building a RF Actuated CW Monitor....The capacators
> are marked " 10n".
> None are marked pf or uf...I know I should know how to convert but i 'v
> been out of school to long....HI HI Thanks for the help...I.m getting
> back on the air after being off for some years...
> Retired now and have lots of time for hamming...
> Best of 73'
> de wb9kzi
> Phil
>
>

Nano is half way inbetween micro and pico: 10^-9.

So 1000 pF is 1 nF, and 1000 nF is 1 uF.

In other words you 10n capacitor is 0.01 uF or probably marked 103, 10
with three zeros worth of pico Farads.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Gibbous (85% of Full)

2787. ISO source for quiet 4" fan

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 14:33:21 UTC
From: enigma_y_2000@yahoo.com
Message-ID: <3e9974b5.158787494@news.usfamily.net>
Source record: 36190

Hi,

What reccomendations do you have for a replacement 120 VAC muffin 4 inch fan (3.75 inch center to center mounting holes) for my Clipperton L amp?

I seek something that is quiet!

Please reply by email.

Thanks, Bob

2788. Re: Help wtth math...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 15:20:29 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <1ffma.58458$ja4.3830732@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36191

nF 10 to the minus 9
pF = 10 to the minus 12
uF = 10 to the minus 6

Hope that helps...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Phil Kirchmeier" <Ckirch@execpc.com> wrote in message
news:3E995CB6.21947D9@execpc.com...
> Morning all...I'm building a RF Actuated CW Monitor....The capacators
> are marked " 10n".
> None are marked pf or uf...I know I should know how to convert but i 'v
> been out of school to long....HI HI Thanks for the help...I.m getting
> back on the air after being off for some years...
> Retired now and have lots of time for hamming...
> Best of 73'
> de wb9kzi
> Phil
>
>

2789. Dial.zip

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 16:38:40 UTC
From: wb8rcr <wb8rcr_nospam@qsl.net>
Message-ID: <v9j4leq0puvc29@corp.supernews.com>
Source record: 36192

I've just uploaded a new version of Dial.zip (the Windows version of Dial) to my QSLMaker site at http://hfradio.org/wb8rcr. I haven't updated the web site yet to indicate the news version, nor have I updated the command line version for Linux nor the Panel program. The Dial and Panel programs are hidden in a link at the bottom of the navbar at the QSLMaker site.

The only change is to allow the dial to be rotated. Previously, the program assumed that the control was positioned "normally", that is, with the dead portion of the control centered on straight down. This is still the default but you may now rotate the dial in one degree increments.

For those of you who haven't used Dial, it is a Windows program that allows you to easily print a dial for a control. The Panel program allows you to create an entire panel, but it produces PostScript output so it's messier to use than Dial which uses whatever Windows printer you have selected.

72/73 de WB8RCR

2790. Re: Dial.zip

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 17:56:05 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3E9AF715.5CA25DE2@rica.net>
Source record: 36193

wb8rcr wrote:
>
> I've just uploaded a new version of Dial.zip (the Windows version of Dial)
> to my QSLMaker site at http://hfradio.org/wb8rcr. I haven't updated the web
> site yet to indicate the news version, nor have I updated the command line
> version for Linux nor the Panel program. The Dial and Panel programs are
> hidden in a link at the bottom of the navbar at the QSLMaker site.
(snip)

Thanks much.

--
John Popelish

2791. Engineering specification required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 18:42:00 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7cau5$da0ej$1@ID-150848.news.dfncis.de>
Source record: 36194

Say you have a meter that shows position of a variable capacitor in a remote atu.

What would be reasonable accuracy of your meter, I mean, would it be reasonable for the meter to show true shaft position within 1 degree, or is that unnecessarily accurate? What would be reasonable accuracy? TIA. Rich.

2792. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 19:51:45 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3E99BFA5.5000107@earthlink.net>
Source record: 36195

Steve McDonald wrote:
> Thanks for all the help guys. I do have several J310s and although they are
> supposed to be the same, the metal-cased U310 is slightly better.
> Thanks again.
>
>
>

U310 is listed in the Tandy Tech America catalog as Cat. # 900-5494.
My catalog is a couple of years old, so they may no longer stock the
device.

If they don't have them, I have a couple of U310s that I might be able
to spare.

Bob, W6NBI

2793. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 20:47:35 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e99ccb2$0$119$edfadb0f@dtext02.news.tele.dk>
Source record: 36196

Hello Steve

> > Thanks for all the help guys. I do have several J310s and although they
are
> > supposed to be the same, the metal-cased U310 is slightly better.

They have them in stock at http://www.ee.washington.edu/stores/

Regards Max

2794. Re: Plessey SP9131 Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 21:25:15 UTC
From: "Mr. Meval" <mrmeval@earthlink.maps.on.net>
Message-ID: <%Akma.22273$ey1.1963822@newsread1.prod.itd.earthlink.net>
Source record: 36047
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Mark Aren wrote:

> Gary,
>
> It's a Dual, 520MHz, ECL D type flip flop.
>
> Input needs to swing -0.31 to -1.11V (with a -0.71V bias).
>
> Output will be 600mV p-p.
>
> CLK1 pin 6, Q1 pin 2, /Q1 pin 3
> CLK2 pin 11, Q2 pin 15, /Q2 pin 14
>
> Also see MC10131.
>
> Mark.

Is there a URL source or was this stored in wetware? ;-)

I looked but didn't find it.

--
Electronics Search FAQ - POINTER
http://www.eetoolbox.com/search/index.htm
http://www.cera2.com/search/index.htm
http://www.eg3.com/search/index.htm
Linux Documentation Project: www.ldp.org

2795. 6L6 vs 1614

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 23:20:53 UTC
From: Bob P <kb8tl@yahooDOT.com>
Message-ID: <ohmma.18$qa5.37493@newssvr28.news.prodigy.com>
Source record: 36048

I'm using a 6L6 in a recently completed homebrew tx and was wondering if anyone knows what the max grid current is rated at. Receiving tube books don't rate such on the 6L6 but it's transmitting doppelganger, the 1614, is rated at 5 mA maximum. Presumably, I can run a 6L6 (metal) at 5 mA and maybe a tad more into a US made 6L6GB or GC...??????

Rig is SS VFO, heterodyned with crystal osc driving 6CL6 to 6L6 out. about 30 Watts out with 42 plate input, 5 mA drive, 520 V on the 6L6 plate.

Bob
KB8TL @ YAHOO . COM

2796. opportunistic junk-boxing Re: What parts do you stock up on?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 23:30:23 UTC
From: rmonagha@engr.smu.edu
Message-ID: <b7crufkjf1@blaze.seas.smu.edu>
Source record: 36049

agreed ;-) the case and power supply are usually the biggest cost items in most projects, and the easiest to recycle and reuse. The chances of finding specialty ICs and being able to recycle them is getting harder and harder due to surface mounting of computer and electronics parts ;-(

But I suggest that "stocking up" by buying a series of particular parts, (esp. at Radio Shack prices) is NOT the way to go for building a low cost junque box ;-) For example, the 2N2222 transistors are readily substituted in many applications using devices recycled from a board of discrete stuff

Opportunistic junk box feeding takes advantage of very low cost items that can be readily used in general projects (e.g., power supplies) or for specific projects (e.g., longwire antenna tuner) when you find them very cheaply.

I'm looking forward to the ham-com fest in June in Dallas, but meanwhile I stock up at our local monthly computer-fest (formerly hamfest, see http://people.smu.edu/arc/sidewalk.html). If you don't have ready access to such parts buy sources, consider adding a parts exchange before local ham club meetings or via local repeater invitation (e.g., monthly, quarterly, etc.). That's how our local electronics fest got started!...

my homebrew buys tend to breakdown as:

a) power supplies and project boxes (often with something in them) - often ugly (e.g., RTTY p/s with multiple logic voltages at many amps $1 ;-)

b) hard to find items - e.g., I just picked up a boxful of 10 high voltage variable caps of various types and roller inductor coils; last month it was a high voltage xmfr ($1) and 330 mfd 450 vdc caps ($.25). At some point, I'll need these for longwire tuner(s) and high voltage power supply (likely to be a photo studio strobe power supply actually)...

c) test gear, such as digital panel meters with internal 110 vac supplies; often test gear is much cheaper used or to fix than to build new (e.g., old heathkits), including probes etc.

d) stuff that is cheap enough to be worth speculating on, e.g., 2 stepper motors with chips interfaced for $.50 each new in box (for a rotating panoramic camera project); two 2x16 LCD displays with serial chip drivers for $.50 (a morse code decoder?) etc.

I agree with other posters that if you get a lot of stuff for free, that's hard to argue with, but it may be hard to find much you can use or recycle in most computer gear, for example, where custom ASICs and surface mount stuff are problematic. Similarly, your time is worth $$ too - you can spend it building power supplies, or recyle cheap power supplies and focus

your time and efforts on the guts of the project ;-)

grins bobm
--
****
* Robert Monaghan POB 752182 Southern Methodist Univ. Dallas Tx 75275 *
**********Standard Disclaimers Apply**********

2797. Re: Engineering specification required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 23:32:17 UTC
From: jgboyles@aol.com
Message-ID: <20030413193217.16137.00000910@mb-ca.aol.com>
Source record: 36050

Hi Rich,
The shaft position accuracy will be highly dependent on the type of transducer used to provide the shaft position information. A shaft position encoder with a digital readout is capable of 1 degree resolution. With a simple potentiometer coupled to the shaft giving a resistance proportional to shaft position, you could expect maybe 10 degree resolution. With a servo or a synchro rotating the cap, and a calibrated dial at the transmitter end, maybe 10 degrees or less.
These numbers are not absolute, but are roughly based on my experience with various transducers. If you need a true Engineering Specification, consult data sheets on the device you are trying to use.

>Say you have a meter that shows position of a variable capacitor in a
>remote atu.
>
>What would be reasonable accuracy of your meter, I mean, would it be
>reasonable for the meter to show true shaft position within 1 degree

73 Gary N4AST

2798. Re: Engineering specification required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 23:48:50 UTC
From: fmmck@aol.com
Message-ID: <20030413194850.04664.00000603@mb-fr.aol.com>
Source record: 36051

<< Say you have a meter that shows position of a variable capacitor in a remote atu.

What would be reasonable accuracy of your meter, I mean, would it be reasonable for the meter to show true shaft position within 1 degree, or is that unnecessarily accurate? >>

Rich-

A potentiometer attached to the capacitor shaft could be connected to an ammeter, so that zero degrees produces zero current and 180 degrees produces full scale. I doubt the linearity of the combination, combined with your ability to read one degree out of 180, would be very precise.

If you use an optical shaft encoder for the capacitor shaft, your accuracy will be determined by the encoder. I would think one degree out of 180 would be possible, but what purpose would it serve?

Assuming the ATU is associated with a transmitter, a more meaningful measurement would be reflected power. I don't think it matters much where the capacitor is set, as long as reflected power is optimized. If a meter is used to indicate the capacitor's setting, it would only be of value to show if there is a radical discrepancy. In that situation, accuracy may not be critical.

73, Fred, K4DII

2799. Re: 6L6 vs 1614

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-13 23:58:16 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <b7ctdr$495$1@news.utelfla.com>
Source record: 36052

Bob P <kb8tl@yahooDOT.com> wrote in message
news:ohmma.18$qa5.37493@newssvr28.news.prodigy.com...
> I'm using a 6L6 in a recently completed homebrew tx and was wondering if
> anyone knows what the max grid current is rated at. Receiving tube books
> don't rate such on the 6L6 but it's transmitting doppelganger, the 1614,
is
> rated at 5 mA maximum. Presumably, I can run a 6L6 (metal) at 5 mA and
maybe
> a tad more into a US made 6L6GB or GC...??????
>
> Rig is SS VFO, heterodyned with crystal osc driving 6CL6 to 6L6 out.
about
> 30 Watts out with 42 plate input, 5 mA drive, 520 V on the 6L6 plate.
>
> Bob
> KB8TL @ YAHOO . COM

The 807, yet another flavor of 6L6, whose specs may be found at
http://www.retrovox.com.au/STC807.pdf , also shows a maximum grid current of
5mA in class C. The 1957 Handbook, pp 176-178, shows a 75W transmitter that
runs two 6L6GBs in parallel with 400V on the plates and 200V on the screens,
and recommends a grid current for both tubes of 6mA. The meter is scaled to
read 20mA full scale.

2800. Re: 6L6 vs 1614

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 00:59:32 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9A07F4.3050706@bellsouth.net>
Source record: 36053

Bob P wrote:
> I'm using a 6L6 in a recently completed homebrew tx and was wondering if
> anyone knows what the max grid current is rated at. Receiving tube books
> don't rate such on the 6L6 but it's transmitting doppelganger, the 1614, is
> rated at 5 mA maximum. Presumably, I can run a 6L6 (metal) at 5 mA and maybe
> a tad more into a US made 6L6GB or GC...??????
>
> Rig is SS VFO, heterodyned with crystal osc driving 6CL6 to 6L6 out. about
> 30 Watts out with 42 plate input, 5 mA drive, 520 V on the 6L6 plate.
>
> Bob
> KB8TL @ YAHOO . COM
>
>

Beware that the 6L6GC is a different tube than the other members of the family.
It can take higher screen voltage and current, and probably higher grid current.

The 6L6, 6L6G, 6L6GA and 6L6GB are all the same tubes except for the envelope. The "G" is an ST16 bulb, the GA is an ST14, the GB is a T14 bulb as is the GC.

The 5881 is similar to the GB with a shorter bulb, brown base, and maybe slightly lower plate ratings. The Metal tubes can not handle more than 450 volts on the plate without danger of arc over to the metal bulb.

2801. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 01:05:23 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9A0953.8040501@bellsouth.net>
Source record: 36054
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
> Is there a free program available that allows one to make one's own
> panel meter scale? TIA. Rich.
>

I made a new scale for a panel meter used on a VTVM. I photo copied the original
(which was very yellowed) and used liquid paper to white out the original numbers. I then used a pencil to draw in my new calibration markings. I photo copied
the marked up copy (adjusting the darkness as required) to get a good clean new scale.

The original markings were for a 3,10,30,100,300,1000 sequence of ranges. My new markings were for 1.5,5,15,50,150,500,1500 sequence of ranges. I changed the
input divider to match.

2802. For Sale: < Two-Way Commercial & Amateur Service Manuals >

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 01:52:11 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <Dxoma.692$b67.257717@read2.cgocable.net>
Source record: 36055
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Have acquired a quantity of Commercial & some Amateur, Two Way Radio Service Manuals...Take a look and see if you have a need for any. Am trying to add to my HTML page as time permits.
73...Norm VE3CZI www.rodemi.com

http://home.cogeco.ca/~rodemi/Service%20Manuals/Service%20Manuals.html

2803. Re: Anybody made their own panel meter scale, and got a professional finish?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 07:52:43 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <9dBloPFLjmm+EAGS@ifwtech.co.uk>
Source record: 36057
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

scharkalvin wrote:
>Richard wrote:
>> Is there a free program available that allows one to make one's own
>> panel meter scale? TIA. Rich.
>>
>
>I made a new scale for a panel meter used on a VTVM. I photo copied
>the original
>(which was very yellowed) and used liquid paper to white out the original
>numbers. I then used a pencil to draw in my new calibration markings.
>I photo copied
>the marked up copy (adjusting the darkness as required) to get a good
>clean new scale.
>
>The original markings were for a 3,10,30,100,300,1000 sequence of ranges.
>My new markings were for 1.5,5,15,50,150,500,1500 sequence of ranges.
>I changed the
>input divider to match.

That technique works even better if you can scan the original scale, and then use PhotoShop, PaintShop Pro or similar software to retouch the image, delete old markings and add new ones.

The alternative is to measure-up the original scale and then use either Jim Tonne's program to draw a new one for you, or do it from scratch using AutoCAD or AutoSketch (which will produce very good results but will probably teach you more about those programs than you ever wanted to know).

Print on thin, glossy white paper, and use 3M spray adhesive to mount the new scale on the rear of the original plate - if you use the front, the original calibration may show through.

The results will be as professional-looking as you care to make them.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2804. WTB / change: AMI S3528

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 08:07:33 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0304140007.1d700232@posting.google.com>
Source record: 36056

Hi all,
does anybody know a source for several pcs of AMI S3528 low-pass
filter ? It was used in the SuperSCAF, see QST April 1986. Or even
better, I can trade 1-4 pcs of S3529 high-pass for them, making
complete pairs on both sides.

BR from Ivan, OK1SIP

2805. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 12:16:32 UTC
From: Stap Rinks <sabbatai_zvi@hotmail.com>
Message-ID: <5k9l9vo0cqmeijf270a48hvmmoees8gdka@4ax.com>
Source record: 36058
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Jimmy - is that a rhetorical question or do you really need to have it explained?

On Sat, 12 Apr 2003 04:11:27 GMT, "Jimmy" <Gfender@carolina.rr.com> was like:

>Why would anyone want one 6lq6?

>"Skipp" <frankiegoestohollywoodbandmovie@yahoo.com> wrote in message
>news:b76qv1huo1@woodrow.ucdavis.edu...
>> Michael,
>>
>> Most of the people reading your ad feel the price is about $15 too much.
>>
>> cheers
>> skipp
>>
>>
>> : In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
>> : For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm
>selling
>> : it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester
>> : where 5000 umhos is the miniman acceptable level. Tube has no shorts.
>$25
>> : which includes shipping in the contanintal USA.
>>
>> : Michael Feldt
>> : feldtm@iquest.net
>> : www.indianaradios.com
>>
>>
>

2806. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 12:18:38 UTC
From: Wes The Cop <wescop@yahoo.net>
Message-ID: <tl9l9vo4c2euud61qcgmf88i3edln64js1@4ax.com>
Source record: 36060
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FUCKING INTERNET POLICE!

Welcome to my kill file.
Another control freak bites the dust...

On Sat, 12 Apr 2003 09:13:48 -0700, Wes Stewart <n7ws@#arrl.net> was
like:

>Give it up. Nobody wants this damn thing and you crossposting it to
>all of these groups every couple of days is getting annoying.
>
>
>On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
><ga_boneyard@hotmail.com> wrote:
>
>|Please see:
>|
>|http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

2807. FS: 585 Scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 12:31:02 UTC
From: "S.A.W" <k1byd@home.com>
Message-ID: <EcOcncl02f9fNAejXTWcoA@comcast.com>
Source record: 36059

For sale Tektronics 585 Scope in good looking condition and works ok.....
Any reasonable offer takes it ....
Buyer must pay for shipping or buyer may pick up Scope...
I will deliver within 30 miles of my location...
If you would like more info or see a picture of the scope E-Mail me ....
Hamstuff@comcast.net

2808. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 16:20:56 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <e6ol9vsia3jfg5k35ddsbmh8h4kl9pvtor@4ax.com>
Source record: 36061

Thank You!

On Mon, 14 Apr 2003 12:18:38 GMT, Wes The Cop <wescop@yahoo.net>
wrote:

>FUCKING INTERNET POLICE!
>
>Welcome to my kill file.
>Another control freak bites the dust...
>
>On Sat, 12 Apr 2003 09:13:48 -0700, Wes Stewart <n7ws@#arrl.net> was
>like:
>
>>Give it up. Nobody wants this damn thing and you crossposting it to
>>all of these groups every couple of days is getting annoying.
>>
>>
>>On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
>><ga_boneyard@hotmail.com> wrote:
>>
>>|Please see:
>>|
>>|http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2809. icom pcr1000 audio problem sourced

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 17:54:25 UTC
From: Skipp <ladodadodayoldjourneysong@yahoo.com>
Message-ID: <b7eskhdbb1@woodrow.ucdavis.edu>
Source record: 36062
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.swap

re: Icom PCR1000 garbled audio problem (narrow band fm mode)
-
Hello there,
-
Just a quick bit of feedback... Last week I posted a garbled audio
problem with an Icom PCR1000 receiver.
-
I traced the problem to the Bonito Software supplied with the unit. The
fix is to down load the latest Icom software from their web site and use
it. The Bonito software seems to have a bug or two... it appears to me
the bandwidth filtering doesn't appear to switch properly.
-
I'm happy with the preformance of the Icom software, it would be neat to
have the Bonito Software work, but I'm sure you'll have to purchase and
upgrade to get things on the road as expected.
-
The 200mW audio from the receiver is kind of puny, but it works and will
drive larger power amplifiers/circuits.
-
OK, that's about it...
cheers
skipp
-
http://sonic.ucdavis.edu

2810. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 18:28:14 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0304141028.bccac33@posting.google.com>
Source record: 36063

fmmck@aol.com (Fred McKenzie) wrote in message
news:<20030412121831.19257.00000567@mb-fp.aol.com>...

> Scharkalvin-
>
> If I figured it right, your 2800 VAC has a maximum value of 3959 volts. If the
> capacitor is charged to that value, the peak reverse voltage on the diode
> string is twice the maximum, or 7918 volts. Your ten diodes do provide a
> safety margin, but maybe not twice.

I've occasionally run into projects in books (even ARRL Handbooks)
where the diode rating in a FW supply was underspecified, e.g. 600V
diodes on a 250V-0-250V transformer. I'd guess that sometimes people
forgot that the entire secondary voltage is across the non-conducting
diodes, not just 1/2 the secondary voltage. (I'm not suggesting this
is the case in Scharkalvin's case, where he did have enough
reverse-voltage margin)
>
> Does anyone know the voltage rating of a half watt resistor? I seem to
> remember a value of somewhere around 350 volts. I recall that for high value
> resistors, the voltage rating is reached long before the power rating!

I believe it's 350V for 1/2W, 500V for 1W and 750V for 2W. Wonder how
many projects made *that* mistake!

73,
Mike, KK6GM

2811. Re: Series diodes -- equalizing needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 18:55:23 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QKVet2AbQwm+EACo@ifwtech.co.uk>
Source record: 36064

Mike Silva wrote:
>>
>> Does anyone know the voltage rating of a half watt resistor? I seem to
>> remember a value of somewhere around 350 volts. I recall that for high value
>> resistors, the voltage rating is reached long before the power rating!
>
>I believe it's 350V for 1/2W, 500V for 1W and 750V for 2W.

It varies between different types, but those are good guide values.

>Wonder how many projects made *that* mistake!

Lots! If you specify resistors that will stand 1000V, you'll find they
cost much more than the diodes they're intended to protect.

There's also a problem for equalizing capacitors, but this time it's
about tolerance. Typical high-voltage disc ceramics are specified at
+/-20%, which will quite effectively UN-equalize the reverse voltages!
If you specify high-voltage capacitors with a tolerance of only a few
percent, you'll again find that "cost inversion".

It's more cost-effective to use larger numbers of new, full-spec diodes
without either resistors or capacitors.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2812. High Performance Medium Wave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-14 22:21:29 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <JvGma.28714$cO3.2115591@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36065

Hi folks,
I have added a high performance MW receiver design to my
website. All of the design information is in zipped form, including DDS
code, board layouts, etc. Have fun!

Pete

2813. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 00:25:12 UTC
From: Al Parker <anchor@ec.rr.com>
Message-ID: <IjIma.325$pr.319008@twister.southeast.rr.com>
Source record: 36067

Hi Serge,
Way back in about 1957 I went to a club meeting in West Hartford, CT, home of the ARRL then, and Ed Tilton, of the ARRL, was the speaker. He showed a 2m phasing exciter he had built in which he used a length of coax for phasing the RF signal. Since the freq. only changed a very small percentage when QSY-ing, the phase changed an insignificant amount, and didn't need to be adjusted. It was only half wave, shortened by the velocity factor, and it was looped inside the chassis. It was a trick that impressed my teenage mind and has stuck with me. I don't know if that unit was ever published.
73,
Al, W8UT
New Bern, NC
BoatAnchors appreciated here
http://www.thecompendium.net/radio/
http://www.hammarlund.info

"Serge" <poissondanlo@wanadoo.fr> wrote in message
news:3E95352C.8020900@wanadoo.fr...
> Hello dears Om
> i am searching about homebrewing a 2 m SSB phasing , have an idea ?
> thinks in advance
> Serge /f5jtm
>

2814. Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 00:28:42 UTC
From: S Fisher <nospam@nospam.com>
Message-ID: <_mIma.27976$D31.3723267@news1.news.adelphia.net>
Source record: 36066

Hi all,

I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k SRAM (6116) and am trying to remember the best way of handling the chip selects. I seem to remember something about slow EPROMS causing a problem?

I have a schematic at http://sholtz.port5.com/z80.html which I think is correct and should give me a ROM range of 0000h - 07ffh and a RAM range of 0800h - 0FFFh. But I would be pleased if anyone has any better suggestions/advice...

S Fisher
inbox at sholtz dot port5 dot com

2815. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 01:25:13 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3E9B5F3C.2070508@earthlink.net>
Source record: 36068

Al Parker wrote:
> Hi Serge,
> Way back in about 1957 I went to a club meeting in West Hartford, CT,
> home of the ARRL then, and Ed Tilton, of the ARRL, was the speaker. He
> showed a 2m phasing exciter he had built in which he used a length of coax
> for phasing the RF signal. Since the freq. only changed a very small
> percentage when QSY-ing, the phase changed an insignificant amount, and
> didn't need to be adjusted. It was only half wave, shortened by the
> velocity factor, and it was looped inside the chassis. It was a trick that
> impressed my teenage mind and has stuck with me. I don't know if that unit
> was ever published.
> 73,
> Al, W8UT
> New Bern, NC
> BoatAnchors appreciated here
> http://www.thecompendium.net/radio/
> http://www.hammarlund.info
>
>
> "Serge" <poissondanlo@wanadoo.fr> wrote in message
> news:3E95352C.8020900@wanadoo.fr...
>
>>Hello dears Om
>>i am searching about homebrewing a 2 m SSB phasing , have an idea ?
>>thinks in advance
>>Serge /f5jtm
>>
>
>
>

You have it nearly, but not quite, correct. I believe that the circuit was published in either the G.E. or RCA ham pamphlets which were like small (4- or 8-page) magazines, published periodically. I cannot remember the names of those publications, except that the one that G.E. put out featured "Lighthouse Larry," a cartoon character based on the 2C40 lighthouse tube.

Anyway, back to the circuit. It used a 1/8 wavelength coax line and a 3/8 wavelength coax line to produce quadrature rf signals which were directed to a double balanced modulator. The quadrature audio signals for the modulator were the outputs from an audio phasing network enclosed in a metal tube housing (same size as a 6C5) and made by B&W (I think - my memory leaves a lot to be desired). Anyway, I built up the circuit and incorporated it into a transmitter ending up with a

3C29 final. The VFO was a BC-221, but I do not remember the intervening circuits. I used this rig on 2M SSB for several years.

A lot of years ago, especially for someone trying to remember things that have happened in a ham career that started in 1939.

Bob, W6NBI

2816. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 01:41:09 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b7fnvl$1ds$1@freenet9.carleton.ca>
Source record: 36069

Bob Stein (w6nbi@earthlink.net) writes:
> Al Parker wrote:
>> Hi Serge,
>> Way back in about 1957 I went to a club meeting in West Hartford, CT,
>> home of the ARRL then, and Ed Tilton, of the ARRL, was the speaker. He
>> showed a 2m phasing exciter he had built in which he used a length of coax
>> for phasing the RF signal. Since the freq. only changed a very small
>> percentage when QSY-ing, the phase changed an insignificant amount, and
>> didn't need to be adjusted. It was only half wave, shortened by the
>> velocity factor, and it was looped inside the chassis. It was a trick that
>> impressed my teenage mind and has stuck with me. I don't know if that unit
>> was ever published.
>> 73,
>> Al, W8UT
>> New Bern, NC
>> BoatAnchors appreciated here
>> http://www.thecompendium.net/radio/
>> http://www.hammarlund.info
>>
>>
>> "Serge" <poissondanlo@wanadoo.fr> wrote in message
>> news:3E95352C.8020900@wanadoo.fr...
>>
>>>Hello dears Om
>>>i am searching about homebrewing a 2 m SSB phasing , have an idea ?
>>>thinks in advance
>>>Serge /f5jtm
>>>
>>
>>
>>
>
> You have it nearly, but not quite, correct. I believe that the
> circuit was published in either the G.E. or RCA ham pamphlets which
> were like small (4- or 8-page) magazines, published periodically. I
> cannot remember the names of those publications, except that the one
> that G.E. put out featured "Lighthouse Larry," a cartoon character
> based on the 2C40 lighthouse tube.
>
> Anyway, back to the circuit. It used a 1/8 wavelength coax line and a
> 3/8 wavelength coax line to produce quadrature rf signals which were
> directed to a double balanced modulator. The quadrature audio signals
> for the modulator were the outputs from an audio phasing network
> enclosed in a metal tube housing (same size as a 6C5) and made by B&W

> (I think - my memory leaves a lot to be desired). Anyway, I built up
> the circuit and incorporated it into a transmitter ending up with a
> 3C29 final. The VFO was a BC-221, but I do not remember the
> intervening circuits. I used this rig on 2M SSB for several years.
>
> A lot of years ago, especially for someone trying to remember things
> that have happened in a ham career that started in 1939.
>
> Bob, W6NBI
>
It was in QST in 1964, though I can't provide the month.

When I saw the subject header, I immediately thought of that article.

Now that you mention it, I think it did refer to a previous article
in one of those manufacturer's newsletters.

The scheme of using wavelengths of coax for the phasing network
also showed up in the RSGB VHF manual in the mid-seventies (and I
would suspect other of their publications), and though I'm not going
to look it up, I think they had a transistorized version alongside
a tube one.

Realistically, it's the coax phasing lines that are important. I'm
not sure there is a lot of reason to duplicate the rest of the old
circuitry, when others have shown phasing circuitry, using more
recent components. There's no sense tracking down a B&W 2Q4
audio phasing network when it's now far easier to get precision
components.

The one in QST was doing the modulating at a low level, with the
expectation of amplifying it afterwards. But once you've got phasing
on the signal frequency, one could also go to high level balanced
modulators, doing away with the need for linears. This was
seen from time to time in the old days, but now when phasing
transmitters come up, nobody seems to be talking about high level
balanced modulators.

Michael VE2BVW

2817. Re: High Performance Medium Wave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 03:55:36 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <YoLma.29052$cO3.2153029@bgtnsc04-news.ops.worldnet.att.net>
Source record: 36070

Here is that URL:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html

Pete

Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote in message
news:JvGma.28714$cO3.2115591@bgtnsc04-news.ops.worldnet.att.net...
> Hi folks,
> I have added a high performance MW receiver design to my
> website. All of the design information is in zipped form, including DDS
> code, board layouts, etc. Have fun!
>
> Pete
>
>

2818. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 04:05:32 UTC
From: cooperjim@aol.com
Message-ID: <20030415000532.14245.00000436@mb-ct.aol.com>
Source record: 36071

Hi Serge

Look at the R2/T2 stuff done by Rich Campbell KK7B (?). Very nice set.

The boards and kits were available from Kanga including a VXO board for 2 meters.

73
Jim Cooper NE6O

>Hello dears Om
>i am searching about homebrewing a 2 m SSB phasing , have an idea ?
>thinks in advance
>Serge /f5jtm

2819. Re: Engineering specification required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 04:26:10 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3E9B89E2.2AD89170@bellatlantic.net>
Source record: 36072

Richard wrote:
>
> Say you have a meter that shows position of a variable capacitor in a
> remote atu.
>
> What would be reasonable accuracy of your meter, I mean, would it be
> reasonable for the meter to show true shaft position within 1 degree, or
> is that unnecessarily accurate? What would be reasonable accuracy? TIA.
> Rich.

The capacitor position as viewed by the person using the
ATU is only to get in the ball park. Once in the ball park,
you tune by watching instrumentation, not the physical
position indication of the cap, so I would say that 1%
accuracy is tremendous overkill.

I just looked at my manual ATU. There are 20 "tick marks"
for 180 degrees capacitor rotation. Every other tick is
numbered. When I tune, I put it on a number, then tweak,
watching the SWR meter. Based on that, reasonable meter
accuracy would be 9 degrees - i.e. within 1 tick mark.

2820. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 06:48:11 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b7g9vabvf1@hercules.btinternet.com>
Source record: 36073

"S Fisher" <nospam@nospam.com> wrote in message
news:_mIma.27976$D31.3723267@news1.news.adelphia.net...
> Hi all,
>
> I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
> SRAM (6116) and am trying to remember the best way of handling the chip
> selects. I seem to remember something about slow EPROMS causing a problem?
>
> I have a schematic at http://sholtz.port5.com/z80.html which I think is
> correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
> 0800h - 0FFFh. But I would be pleased if anyone has any better
> suggestions/advice...

What is your clock frequency and what speed is the EPROM - you might need
one or more wait states? The RAM will be OK.

I built something like that over 20 years ago, with a simple
monitor/debugger.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2821. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 08:02:32 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E9BBC98.1070609@wanadoo.fr>
Source record: 36074

Hi, Al
response in your mail post
but a 1/2 half is 180ï¿½
phasing is not 0ï¿½ and 90ï¿½ ? may be ..
73's
Serge

2822. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 08:11:01 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E9BBE95.1050802@wanadoo.fr>
Source record: 36075

Hi , Jim
yes , i saw the kanga kit , but i prefer using not buying ...
i have shematics of t2/r2 , just missing shematics 2m vxo adaptator and
i would like try with a diplexer
73's
Serge

2823. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 13:39:32 UTC
From: Al Parker <anchor@ec.rr.com>
Message-ID: <oYTma.1671$pr.478124@twister.southeast.rr.com>
Source record: 36076

hi everyone,
Yes, I was wrong about the 1/2 wave coax - my memory ain't great and my tech. brain didn't click in. ;-) maybe there was more than one length in there, also.
I'm glad I could at least start some conversation for Serge, 3-4 days after his original query.
73,
Al, W8UT
New Bern, NC
BoatAnchors appreciated here
http://www.thecompendium.net/radio/
http://www.hammarlund.info

2824. FS: Eimac SK-410 Sockets for 4-400/3-500 Plus AMP PARTS w/pics!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 16:06:19 UTC
From: rlucch2098@aol.com
Message-ID: <20030415120619.05668.00001366@mb-fo.aol.com>
Source record: 36077

Hi All;
I have two used Eimac Sockets #SK-410 for 4-400A tubes.
Removed from service, I tried to keep all together with as many screws & nuts
as I cud keeps my fingers on :-)
Pics>>
http://www.myradioroom.com/eimacsockets1.jpg
http://www.myradioroom.com/eimacsockets2.jpg
Price is $110ppd Conus.

Also have the Filiment transformer for (2)4-400a's
Pics>>
http://www.myradioroom.com/filimantxformer1.jpg
http://www.myradioroom.com/filimantxformer2.jpg
B/O, weights 12lbs packed.

Also have a Safetly Pressure switch by DWYER, see pics>>
http://www.myradioroom.com/pressureswitch1.jpg
http://www.myradioroom.com/pressureswitch2.jpg
Also B/O.

How about a Millen Disc Neautralizing Cap, 4-25pf., 3-1/2"h x 3-3/4"dp w 2-1/8"
dia discs.
$15.00ppd!
Pic>>
http://www.myradioroom.com/millendisccap.jpg

Even an OHMITE Z-7 84uh, 1000ma Plate choke w/ceramics.
6"lg x 5/8" dia
Again B/O.
Pic>>
http://www.myradioroom.com/platechoke.jpg

Thanks;
Rich WA2RQY

2825. ** FLEA at MIT ** Sunday April 20th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 16:51:14 UTC
From: w1gsl@mit.edu
Message-ID: <3e9c3882$0$3937$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 36078
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday.... The seasons first...

+++ Now even more Buyers Parking !!!
Thanks to TKT we have use of their new parking lot
across Albany St from the SWAPFEST !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday April 20th 2003
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2003 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

FLEA at MIT 2003 Advance Space Application

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

2826. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 17:24:40 UTC
From: joe needs to get off the decafe <spamjoenotme@juno.com>
Message-ID: <b7hf8o$r9r$4@woodrow.ucdavis.edu>
Source record: 36079
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

: In rec.radio.cb Joe <joe.amp@nospamverizon.net> wrote:
: Skipp, you expect a NOS NIB GE 6LQ6 for $10........Nonsense !

Never said that Joe, go back and read my original post or get off the
decafe.

: Its a bit to low seen em bring $45 other places.

Even higher in various locations.

: Problem is he's not selling a set.

why would it be a problem..?

: Dont listen to this nonsense Mike !!
: -Joe

tis still the truth... like it or not.
skipp

:> Most of the people reading your ad feel the price is about $15 too much.

2827. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 17:28:14 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3E9C40F2.2040703@earthlink.net>
Source record: 36080

Al Parker wrote:
> hi everyone,
> Yes, I was wrong about the 1/2 wave coax - my memory ain't great and my
> tech. brain didn't click in. ;-) maybe there was more than one length in
> there, also.
> I'm glad I could at least start some conversation for Serge, 3-4 days
> after his original query.
> 73,
> Al, W8UT
> New Bern, NC
> BoatAnchors appreciated here
> http://www.thecompendium.net/radio/
> http://www.hammarlund.info
>
>
>

My memory and my keyboard are both in bad shape. The final was a 3E29
(an 829B beefed up for pulse service), not a 3C29.

Bob, W6NBI

2828. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 18:44:59 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b7hjvb$4ok$1@freenet9.carleton.ca>
Source record: 36081

Bob Stein (w6nbi@earthlink.net) writes:
> Al Parker wrote:
>> hi everyone,
>> Yes, I was wrong about the 1/2 wave coax - my memory ain't great and my
>> tech. brain didn't click in. ;-) maybe there was more than one length in
>> there, also.
>> I'm glad I could at least start some conversation for Serge, 3-4 days
>> after his original query.
>> 73,
>> Al, W8UT
>> New Bern, NC
>> BoatAnchors appreciated here
>> http://www.thecompendium.net/radio/
>> http://www.hammarlund.info
>>
>>
>>
>
> My memory and my keyboard are both in bad shape. The final was a 3E29
> (an 829B beefed up for pulse service), not a 3C29.
>
> Bob, W6NBI
>
I dug up the QST article, it's the November 1964 issue, on page 11,
"Balanced Modulators for VHF and UHF Sideband" by James O'Hern
and Thomas Sly.

It references the GE Ham News article, "A 144Mc Direct SSB Generator"
by O'Hern, in the Sept-Oct 1962 issue.

There's enough in the article to get it going, but the prime reason
for the QST article is to update the balanced modulator. He starts
off by saying people were having problems finding four matched triodes
used in the original, and there were layout problems, which resulted
in less than ideal balance.

They switched to two dual-triodes, 2C51's, because their pinout
was more conducive to a balanced layout. (And it's the only time I
can remember seeing a 2C51 used in hobby circles.)

It also shows a transitron oscillator, again the only time I saw
it used in a practical hobby circuit, for it's apparent stability.

"As in the Ham News unit, the balanced modulators are driven from
a 50-ohm source, split by a coaxial-line T arrangement. One branch
of the T is 1/8 wavelength of RG-62/U and feeds one of the dual triodes.

The other branch is 3/8 wavelength of the same type of cable which feeds the second dual triode. For 2 meters, the lengths figure out to be 9 and 27 inches. This arrangement gives a very accurate 90-degree RF phase shift over a wide band of frequencies. By using terminated sections, instead of a single quarter-wave line, the RF amplitudes at the output ends of the T are equal and the VSWR is low."

As I said, the coax phasing line is the key to all this, and could be used at other frequencies up until the lengths of coax get too big, or too small, to deal with.

And once the scheme is understood, there is nothing to prevent it from being used with more recent balanced modulators, including the T2. The QST article mentions how they tried diode balanced modulators, with less than ideal success, but then that was nearly forty years ago.

Michael VE2BVW

2829. WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 19:46:37 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <xkZma.24740$ey1.2230025@newsread1.prod.itd.earthlink.net>
Source record: 36082
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Disabled on fixed income looking for an MFJ antenna analyzer.Please state
price and condition.
Thanks !!

2830. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 20:05:53 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E9C6621.9000307@wanadoo.fr>
Source record: 36083

Hi all,

Al said :I'm glad I could at least start some conversation for Serge, 3-4 days after his original query.
response : no matter , Al ... there is no fire in the house ...
phasing by coax may be good for TX up 2 m , i dont know .
sure on 2 meters , below, many feet is no possible in a housing TX ..hi .....
73"s
Serge / f5jtm

2831. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 20:22:24 UTC
From: aruder@pipeline.com
Message-ID: <b7hsn5ibi2@slb0.atl.mindspring.net>
Source record: 36085

I don't know about internet police, but I do know I have a box of heavy air-core inductors, and that I have believed for years that they had something to do with HB radio.

This is, I believe, one of hte things that drive people away from Amateur Radio: The number of people out there who have no idea what is going on, but who are eager to set the rules for everyone else.

WB0NRU, since the mid 1970s, ex WB4YGX before then.

k7itm@aol.com (Tom Bruhns) wrote:

>Well, it _especially_ doesn't belong here in r.r.a.h. It looks to me
>like he's making these things and putting them out for sale. I don't
>mind an occasional one-off posting here for something like this, but
>this looks commercial to me.

>Cheers,
>Tom

>Wes Stewart <n7ws@#arrl.net> wrote in message
news:<2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>...
>> Give it up. Nobody wants this damn thing and you crossposting it to
>> all of these groups every couple of days is getting annoying.
>>
>>
>> On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
>> <ga_boneyard@hotmail.com> wrote:
>>
>> |Please see:
>> |
>> |http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

2832. Re: WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 21:10:59 UTC
From: Scott <scott_unit_69@yahoo.bomb>
Message-ID: <3E9C7563.FBBC2989@yahoo.bomb>
Source record: 36084
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Me, too. <:

(If you believe that, I'll tell you another.)

SWL wrote:
>
> Disabled on fixed income looking for an MFJ antenna analyzer.Please state
> price and condition.
> Thanks !!

2833. Re: WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 21:52:33 UTC
From: kludge@panix.com
Message-ID: <b7huv1pml1@panix2.panix.com>
Source record: 36086
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <xkZma.24740$ey1.2230025@newsread1.prod.itd.earthlink.net>,
SWL <radiovintage@hotmail.com> wrote:
>Disabled on fixed income looking for an MFJ antenna analyzer.Please state
>price and condition.

Don't do it. It's a waste of money at any price.
You can build a more effective noise bridge yourself for cheap.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2834. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 22:21:03 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3E9C8592.1000004@earthlink.net>
Source record: 36087

Michael Black wrote:
> Bob Stein (w6nbi@earthlink.net) writes:
>
>>Al Parker wrote:
>>
>>>hi everyone,
>>> Yes, I was wrong about the 1/2 wave coax - my memory ain't great and my
>>>tech. brain didn't click in. ;-) maybe there was more than one length in
>>>there, also.
>>> I'm glad I could at least start some conversation for Serge, 3-4 days
>>>after his original query.
>>>73,
>>>Al, W8UT
>>>New Bern, NC
>>>BoatAnchors appreciated here
>>>http://www.thecompendium.net/radio/
>>>http://www.hammarlund.info
>>>
>>>
>>>
>>
>>My memory and my keyboard are both in bad shape. The final was a 3E29
>>(an 829B beefed up for pulse service), not a 3C29.
>>
>>Bob, W6NBI
>>
>
> I dug up the QST article, it's the November 1964 issue, on page 11,
> "Balanced Modulators for VHF and UHF Sideband" by James O'Hern
> and Thomas Sly.
>
> It references the GE Ham News article, "A 144Mc Direct SSB Generator"
> by O'Hern, in the Sept-Oct 1962 issue.
>
> There's enough in the article to get it going, but the prime reason
> for the QST article is to update the balanced modulator. He starts
> off by saying people were having problems finding four matched triodes
> used in the original, and there were layout problems, which resulted
> in less than ideal balance.
>
> They switched to two dual-triodes, 2C51's, because their pinout
> was more conducive to a balanced layout. (And it's the only time I
> can remember seeing a 2C51 used in hobby circles.)
>

> It also shows a transitron oscillator, again the only time I saw
> it used in a practical hobby circuit, for it's apparent stability.
>
> "As in the Ham News unit, the balanced modulators are driven from
> a 50-ohm source, split by a coaxial-line T arrangement. One branch
> of the T is 1/8 wavelength of RG-62/U and feeds one of the dual triodes.
> The other branch is 3/8 wavelength of the same type of cable which
> feeds the second dual triode. For 2 meters, the lengths figure out
> to be 9 and 27 inches. This arrangement gives a very accurate 90-degree
> RF phase shift over a wide band of frequencies. By using
> terminated sections, instead of a single quarter-wave line, the
> RF amplitudes at the output ends of the T are equal and the VSWR
> is low."
>
> As I said, the coax phasing line is the key to all this, and could
> be used at other frequencies up until the lengths of coax get too
> big, or too small, to deal with.
>
> And once the scheme is understood, there is nothing to prevent
> it from being used with more recent balanced modulators, including
> the T2. The QST article mentions how they tried diode balanced
> modulators, with less than ideal success, but then that was nearly
> forty years ago.
>
> Michael VE2BVW
>

While on the subject of coax length vs frequency, I am reminded of a 1-megawatt Loran amplifier I worked on at Federal Telephone & Radio in the late forties. It was for the original Loran frequencies, 1800-2000 Kc (this was before kHz!). We used a half-wave coax balun to convert the 50-ohm unbalanced 160 kW output from the driver transmitter to the push-pull amplifier tubes - actually 12 in p-p-parallel. The coax was RG-8/U or RG-213/U wound in a flat spiral on the back wall of the amplifier cabinet. At the center frequency of 1900 Kc, this would have been about 176 feet.

Bob, W6NBI

2835. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 22:37:02 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <fd2p9vohit5ifnils5enc6l50ujrgs62ev@4ax.com>
Source record: 36090

You are absolutely right Lou. If someone is not interested in the FA items they could easily add them to a kill filter and they would never be bothered by them. As for myself, I don't mind them. I glance at the title to see if it might be of interest to me and then go on. The problem is that a lot of people want control. If everyone had it exactly their way, there would be no posts.

Tracy

On Tue, 15 Apr 2003 20:22:24 GMT, aruder@pipeline.com (Lou Hinshaw) wrote:

>I don't know about internet police, but I do know I have a box of heavy air-core
>inductors, and that I have believed for years that they had something to do with
>HB radio.
>
>This is, I believe, one of hte things that drive people away from Amateur Radio:
>The number of people out there who have no idea what is going on, but who are
>eager to set the rules for everyone else.
>
>WB0NRU, since the mid 1970s, ex WB4YGX before then.
>
>k7itm@aol.com (Tom Bruhns) wrote:
>
>>Well, it _especially_ doesn't belong here in r.r.a.h. It looks to me
>>like he's making these things and putting them out for sale. I don't
>>mind an occasional one-off posting here for something like this, but
>>this looks commercial to me.
>
>>Cheers,
>>Tom
>
>>Wes Stewart <n7ws@#arrl.net> wrote in message
news:<2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>...
>>> Give it up. Nobody wants this damn thing and you crossposting it to
>>> all of these groups every couple of days is getting annoying.
>>>
>>>
>>> On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
>>> <ga_boneyard@hotmail.com> wrote:
>>>
>>> |Please see:
>>> |
>>> |http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2836. Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 22:59:47 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E9C8EE3.26324F8@visi.com>
Source record: 36092

Hi gang,
I have several large (15"X15") pieces of PC board that I want to cut up into something like 4"X2" strips for some 'dead bug' projects. I have been struggling with tin snips, but on pieces this big, they just don't cut it (sorry).

Any thoughts on cutting this stuff? I would just as soon cut off individual pieces as opposed to cutting it all up at once.

Tnx es 72
Bob WB0POQ

2837. Re: wrong email address??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 23:26:22 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E9C9528.FFC82757@silverstar.com>
Source record: 36088

Any of the Motorola RF Data Manual sets [Vols. 1&2] has everything
needed to construct RF Amps from QRP to 1200 watts LF up thru microwave.
PC board layouts, PCB masters; parts lists & schematics.

Roln wrote:

> A fellow ham gave me the email address of someone that has plans for
> building a solid state amplifier, but the address is invalid.
> Perhaps someone on this NG knows the correct address???
>
> The address I have is:
>
> dave@ticks.force9.co
>
> TIA
>
> Roln

2838. Re: WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 23:28:34 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E9C9543.4050404@socal.rr.com>
Source record: 36093
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

MFJ made two antenna analyzers. One was the "simple noise bridge" and
almost next to useless. The other one had the signal source and was rather
complex. It worked very well for what it is.

Jeff

Scott Dorsey wrote:

>In article <xkZma.24740$ey1.2230025@newsread1.prod.itd.earthlink.net>,
>SWL <radiovintage@hotmail.com> wrote:
>
>
>>Disabled on fixed income looking for an MFJ antenna analyzer.Please state
>>price and condition.
>>
>>
>
>Don't do it. It's a waste of money at any price.
>You can build a more effective noise bridge yourself for cheap.
>--scott
>
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

2839. Re: Intersil Transistor Info Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 23:35:44 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E9C975A.3450B97D@silverstar.com>
Source record: 36089

Nothing at htp://www.intersil.com/ ?
Try 1-800-442-7747
Downloadable data sheets from 1-407-724-7800

Brad wrote:

> Anyone have a datasheet for an Intersil transistor marked ITS3322 and
> with date stamp 7043? This appears to be a dual matched n-channel JFET
> (has 6 leads).
>
> Brad

2840. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-15 23:43:24 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E9C9927.312BD92D@silverstar.com>
Source record: 36091
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

http://www.amidon-inductive.com/ should have the info you require

Jason Hsu wrote:

> Can anyone here tell me if I need different ferrite cores? The SWR
> meter I am working on seems to work OK on the lower bands but does not
> work on the higher bands. I don't think I have any stray capacitances
> or inductances in my circuit. (This is HF, not VHF, UHF, or
> microwave.) However, I do understand that ferrite cores have their
> limitations, and I believe those are the source of my problem.
>
> The design I am using is based on that portrayed in the last of the
> three schematics at:
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html
>
> One difference between my design and that one is that I apply an RC
> low-pass filter to the diode outputs consisting of a .001uF capacitor
> and a 100k-ohm resistor in parallel.
>
> The ferrite cores I am using have #43 type material. The dimensions
> are .5-in. thickness, .625-in. outer diameter, and .3125-in. inner
> diameter. The turns ratios are 1:10 for both. I noticed that most of
> the other SWR meter designs use smaller cores. (I'm wondering if I
> have stray capacitance between the primary and secondary wires due to
> the relatively long length of wire my cores use as compared to the
> wire lengths of smaller cores.)
>
> I tested my design by connecting it to my transceiver and dummy load.
> The dummy load is supposed to be 50 ohms, but it has stray
> capacitances in parallel to the load, and this causes the SWR to go up
> as the frequency increases. I used full power in order to minimize the
> effects of diode losses.
>
> At 1.8MHz, my MFJ SWR meter showed an SWR of 1.9 and 60W of power. The
> forward voltage sample is 6.46V DC, or 10% of the actual forward
> voltage. The reflected voltage sample is 1.707V. This gives an SWR of
> 1.7. Considering that the MFJ SWR cross-needle meter has mediocre
> resolution, these results seem reasonable.
>
> At 3.8MHz, my MFJ SWR meter showed an SWR of 3 and 20W of power. (As
> you can see, the high SWR protection circuit in the transceiver was at
> work to limit transmitted power when the SWR is high.) I had 3.578V
> forward, 1.795V reflected, and a measured SWR of 3. So far, so good.
>

> At 7.2MHz, my MFJ SWR meter showed an SWR of 5 and 15W of power. The
> measurements were 2.838V forward, 2.166V reflected, and an SWR of 7.5.
> Considering the awful resolution of the MFJ meter at high SWRs, this
> seems reasonable.
>
> At 10.12MHz, my MFJ SWR meter showed an SWR between 5 and infinity.
> The measurements were 2.941 forward, 2.673 reflected, and an SWR of
> 21.
>
> Around the 20m band, my SWR meter begins to fail. At all higher
> frequencies, my MFJ meter showed 10-20W of power and an extremely high
> SWR. The forward reflected power drifted down from 2.692V at 14.3MHz
> to 1.5V at 29MHz. At 14.3MHz, my reflected voltage was 1.3% HIGHER
> than my forward voltage. At still higher frequencies, my measured SWR
> actually dropped.
>
> My measured SWR was infinity at 14.3MHz, 89 at 18.1MHz, 13 at 21.3MHz,
> 5.7 at 24.9MHz, and only 3.9 at 29MHz.
>
> Can anyone help me? Do I need a smaller #43 core? Should I switch to a
> #61 core?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

2841. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 00:16:53 UTC
From: hexter@blazenet.net
Message-ID: <v9p87lhqgtbo70@corp.supernews.com>
Source record: 36094

In article <_mIma.27976$D31.3723267@news1.news.adelphia.net>,
nospam@nospam.com says...
>
>Hi all,
>
>I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
>SRAM (6116) and am trying to remember the best way of handling the chip
>selects. I seem to remember something about slow EPROMS causing a problem?
>
>I have a schematic at http://sholtz.port5.com/z80.html which I think is
>correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
>0800h - 0FFFh. But I would be pleased if anyone has any better
>suggestions/advice...
>
>S Fisher
>inbox at sholtz dot port5 dot com
>

Almost any 2716, 2516, or even 2532 should be plenty fast enough. The only instance where I ever ran into timing issues was with the ancient dinosaurs like 2708, or 1702. Those 2 chips were tri-voltage, and make great pistol targets for 25 yards.

2842. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 00:23:42 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <io1na.224986$0g4.6371211@news2.east.cox.net>
Source record: 36095

Bob

Try a large paper cutter--the guillotine type you see in schools,
etc.

Peter

"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3E9C8EE3.26324F8@visi.com...
> Hi gang,
> I have several large (15"X15") pieces of PC board that I want to cut
> up into something like 4"X2" strips for some 'dead bug' projects. I have
> been struggling with tin snips, but on pieces this big, they just don't
> cut it (sorry).
>
> Any thoughts on cutting this stuff? I would just as soon cut off
> individual pieces as opposed to cutting it all up at once.
>
> Tnx es 72
> Bob WB0POQ
>

2843. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 00:43:38 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1050453819.966741@auth2.dns.griffin.net.uk>
Source record: 36096

use a steel rule as a guide and score the pcb on both sides with a sharp stanley type knife. then just snap it.it either doesnt snap so score it again, or it gives a lovely straight "cut". works with all pcb up to 1/16 inch, including fibreglass..
"Bob Liesenfeld" <wb0poq@visi.com> wrote in message news:3E9C8EE3.26324F8@visi.com...
> Hi gang,
> I have several large (15"X15") pieces of PC board that I want to cut
> up into something like 4"X2" strips for some 'dead bug' projects. I have
> been struggling with tin snips, but on pieces this big, they just don't
> cut it (sorry).
>
> Any thoughts on cutting this stuff? I would just as soon cut off
> individual pieces as opposed to cutting it all up at once.
>
> Tnx es 72
> Bob WB0POQ
>

2844. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 01:00:49 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9CAB41.5010505@bellsouth.net>
Source record: 36097

zindazenda wrote:
> use a steel rule as a guide and score the pcb on both sides with a sharp
> stanley type knife. then just snap it.it either doesnt snap so score it
> again, or it gives a lovely straight "cut". works with all pcb up to 1/16
> inch, including fibreglass..
> "Bob Liesenfeld" <wb0poq@visi.com> wrote in message
> news:3E9C8EE3.26324F8@visi.com...
>
>>Hi gang,
>> I have several large (15"X15") pieces of PC board that I want to cut
>>up into something like 4"X2" strips for some 'dead bug' projects. I have
>>been struggling with tin snips, but on pieces this big, they just don't
>>cut it (sorry).
>>
>> Any thoughts on cutting this stuff? I would just as soon cut off
>>individual pieces as opposed to cutting it all up at once.
>>
>>Tnx es 72
>>Bob WB0POQ
>>
>
>
>

A scroll saw can also be used.

2845. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 01:41:06 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b7icbi$ru2$1@freenet9.carleton.ca>
Source record: 36099

Tracy Fort (beerbarrel@cox.net) writes:
> You are absolutely right Lou. If someone is not interested in the FA
> items they could easily add them to a kill filter and they would never
> be bothered by them. As for myself, I don't mind them. I glance at the
> title to see if it might be of interest to me and then go on. The
> problem is that a lot of people want control. If everyone had it
> exactly their way, there would be no posts.
>
> Tracy
>
Excuse me? rec.radio.amateur.homebrew is a discussion newsgroup.
You want ads here? Then don't expect us to answer your messages.
Indeed, don't expect us to fill the newsgroup with content if
you think the lack of ads will result in "no posts".

There is a newsgroup, rec.radio.swap for you to sell your stuff.
We aren't people "who have no idea what is going on" we are people
who have been around this newsgroup for years. I've been here for
8 years, I'm pretty sure some still around who have been here for
longer. Back then, there was even fuss about personal forsale
ads generally, because it was still on the cusp of the internet moving to
a more commercial medium. People like you use the excuse "well
the charter doesn't say anything against ads", when the fact of
the matter is that when the newsgroup was created, it did not need
to be specifically spelled out in each newsgroup charter because
it was the norm, with the exception being specific buy and sell
newsgroups.

So when people complain about your ads (and this particular one
has been made a lot worse by the cross-posting, and the frequency of the
same ad) it's because we do know that they are out of place. And given
all that we have put into the newsgroup over the years, in
terms of posting discussion, I think we have a little bit more
to say on the matter than you, a relative newcomer.

Letting ads in is dangerous, because as I've said so many times,
once there are even a few ads it in effect gives permission to
others to post their ads. And it doesn't even stop with items
related to the newsgroup; first you get ham equipment, then you
get the consumer electronic stuff, then the computer stuff, and
then the guns. And then since there's already junk and off topic
at that, it's easy to slip in completely off topic discussions.

Witness rec.radio.amateur.equipment It's not a forsale newsgroup,
despite all the ads. It's for discussion of the equipment. People

years ago were brow-beaten when they tried to keep the ads out,
so it slid even further.

Witness rec.radio.amateur.boatanchors I remember when it was
created, and there was an argument over whether the charter
should allow ads. The people who felt that buying and selling
was integral to the hobby won out. It didn't take long before
the ads were more numerous than the actual discussion. And I've
seen all the ads for things that aren't boatanchors; idiots think
that their need to sell something overrides what others think
so when they see ads in that newsgroup, they throw in theirs
for everything else, including recent amateur equipment.

Witness rec.radio.amateur.misc It's not particularly full of ads,
yet what's the point of it when there is virtually nothing in there
of value.

I'm tired of people like you trying to bully people who want these
spaces to still be a good place for discussion, by using terms like
'net cop" and "control freaks". I've seen people give up on that
task, and I regret that, not just because they shouldn't have been
bullied, but because by not making a stand, it just gets that much
easier for the ads to show up.

Michael VE2BVW

>
> On Tue, 15 Apr 2003 20:22:24 GMT, aruder@pipeline.com (Lou Hinshaw)
> wrote:
>
>>I don't know about internet police, but I do know I have a box of heavy air-core
>>inductors, and that I have believed for years that they had something to do with
>>HB radio.
>>
>>This is, I believe, one of hte things that drive people away from Amateur Radio:
>>The number of people out there who have no idea what is going on, but who are
>>eager to set the rules for everyone else.
>>
>>WB0NRU, since the mid 1970s, ex WB4YGX before then.
>>
>>k7itm@aol.com (Tom Bruhns) wrote:
>>
>>>Well, it _especially_ doesn't belong here in r.r.a.h. It looks to me
>>>like he's making these things and putting them out for sale. I don't
>>>mind an occasional one-off posting here for something like this, but
>>>this looks commercial to me.
>>
>>>Cheers,
>>>Tom
>>
>>>Wes Stewart <n7ws@#arrl.net> wrote in message
news:<2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>...

>>>> Give it up. Nobody wants this damn thing and you crossposting it to
>>>> all of these groups every couple of days is getting annoying.
>>>>
>>>>
>>>> On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
>>>> <ga_boneyard@hotmail.com> wrote:
>>>>
>>>> |Please see:
>>>> |
>>>> |http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x
>>
>
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2846. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 01:49:22 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E9CB68E.4000206@attbi.com>
Source record: 36098

You might check to see if you can rent a Tile cutter, (not the saw
type)they work also.
Bill Higdon
zindazenda wrote:
> use a steel rule as a guide and score the pcb on both sides with a sharp
> stanley type knife. then just snap it.it either doesnt snap so score it
> again, or it gives a lovely straight "cut". works with all pcb up to 1/16
> inch, including fibreglass..
> "Bob Liesenfeld" <wb0poq@visi.com> wrote in message
> news:3E9C8EE3.26324F8@visi.com...
>
>>Hi gang,
>> I have several large (15"X15") pieces of PC board that I want to cut
>>up into something like 4"X2" strips for some 'dead bug' projects. I have
>>been struggling with tin snips, but on pieces this big, they just don't
>>cut it (sorry).
>>
>> Any thoughts on cutting this stuff? I would just as soon cut off
>>individual pieces as opposed to cutting it all up at once.
>>
>>Tnx es 72
>>Bob WB0POQ
>>
>
>
>

2847. Where to buy parts on LongIsland area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 03:02:22 UTC
From: Satya <satya@none.com>
Message-ID: <2J3na.13448$MB4.3326533@news4.srv.hcvlny.cv.net>
Source record: 36100

I want to buy some electronic components for building robotics related stuff. I don't know where to buy the parts like diodes, ICs, transistors, resistors ,capacitors, connectors etc. I saw some parts in Radio shack, but the selection is very limited and pricey then most other mail order stores. I am reluctant to mail order stuff since I need in small quantities.

There used to be a active/future components store in Ronkonkoma which had decent selection, but this store is closed recently. So, I am on a lookout for retail store that sells electronics store.

TIA,
Satya

2848. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 07:06:53 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3E9D010D.5030206@wanadoo.fr>
Source record: 36101

Hi , Bob
You said : half-wave coax balun to convert the 50-ohm unbalanced 160 kW
output from the driver transmitter to the push-pull amplifier
yes, today , we using again this , to convert 50 to 200 in antennas feed .
but 160 kW in a RG8 or 213 , is possible ? even if : 2 (in the 2 arms) ?
73's
Serge

2849. Re: WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 08:24:03 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0304160024.779bbb8@posting.google.com>
Source record: 36102
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"SWL" <radiovintage@hotmail.com> wrote in message
news:<xkZma.24740$ey1.2230025@newsread1.prod.itd.earthlink.net>...
> Disabled on fixed income looking for an MFJ antenna analyzer.Please state
> price and condition.
> Thanks !!

I expect you want the MFJ259 analyzer. It's quite a good stuff, but
the RF-1 Analyst can do nearly the same job for half the price.

BR from Ivan OK1SIP

2850. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 09:30:32 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b7j7rn$2pl$3@titan.btinternet.com>
Source record: 36103

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1050453819.966741@auth2.dns.griffin.net.uk...
> use a steel rule as a guide and score the pcb on both sides with a sharp
> stanley type knife. then just snap it.it either doesnt snap so score it
> again, or it gives a lovely straight "cut". works with all pcb up to 1/16
> inch, including fibreglass..

That's how I do it. I scribe it first (with a scriber, of course) as I find
it stops the knife wandering. I use paper/fibreglass composite PCB material
(FPC-16) which cuts and drills much easier than FR4 and is cheaper.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2851. Re: Where to buy parts on LongIsland area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 09:59:06 UTC
From: colin322@sinaman.com
Message-ID: <8eaa73f2.0304160159.2a688d88@posting.google.com>
Source record: 36104

Satya,

If you still want to buy from web, you may try
http://www.pycomponents.com. They are managed by a HK company but the
prices sound good.

Colin

"Satya" <satya@none.com> wrote in message
news:<2J3na.13448$MB4.3326533@news4.srv.hcvlny.cv.net>...
> I want to buy some electronic components for building robotics related
> stuff. I don't know where to buy the parts like diodes, ICs, transistors,
> resistors ,capacitors, connectors etc. I saw some parts in Radio shack, but
> the selection is very limited and pricey then most other mail order stores.
> I am reluctant to mail order stuff since I need in small quantities.
>
> There used to be a active/future components store in Ronkonkoma which had
> decent selection, but this store is closed recently. So, I am on a lookout
> for retail store that sells electronics store.
>
> TIA,
> Satya

2852. Pin out for PT31963 power transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 10:09:12 UTC
From: Neil <nobody@nospam.net>
Message-ID: <b7ja49$p7n$1$8300dec7@news.demon.co.uk>
Source record: 36105
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi there,

I'm trying desperately to find out the pin-out for a PT31963 RF power transistor. Can anyone help? I know which wires are the emitter & I'm presuming the small wire is the base, but not 100% sure!

--

Neil
(Manchester, UK)

2853. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 10:31:06 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <c4cq9v4d0drrgcl4mmscqdfo23cftor43q@4ax.com>
Source record: 36106

Evidently you need more practice reading posts. I did not post the
ads. I don't condone the ads. I don't care if the ads are there or
not. I have yet to post an ad to any newsgroup. I've been here longer
than 8 years. Like I said, learn to use a kill filter. I never used
the term control freak or net cop. That term seems to fit you pretty
well though.

On 16 Apr 2003 01:41:06 GMT, et472@FreeNet.Carleton.CA (Michael Black)
wrote:

>Tracy Fort (beerbarrel@cox.net) writes:
>> You are absolutely right Lou. If someone is not interested in the FA
>> items they could easily add them to a kill filter and they would never
>> be bothered by them. As for myself, I don't mind them. I glance at the
>> title to see if it might be of interest to me and then go on. The
>> problem is that a lot of people want control. If everyone had it
>> exactly their way, there would be no posts.
>>
>> Tracy
>>
>Excuse me? rec.radio.amateur.homebrew is a discussion newsgroup.
>You want ads here? Then don't expect us to answer your messages.
>Indeed, don't expect us to fill the newsgroup with content if
>you think the lack of ads will result in "no posts".

again, I did not post the ads. I have yet to see you answer any of my
posts anyway so what does it matter if you don't.
>
>There is a newsgroup, rec.radio.swap for you to sell your stuff.
>We aren't people "who have no idea what is going on" we are people
>who have been around this newsgroup for years. I've been here for
>8 years, I'm pretty sure some still around who have been here for
>longer. Back then, there was even fuss about personal forsale
>ads generally, because it was still on the cusp of the internet moving to
>a more commercial medium. People like you use the excuse "well
>the charter doesn't say anything against ads", when the fact of
>the matter is that when the newsgroup was created, it did not need
>to be specifically spelled out in each newsgroup charter because
>it was the norm, with the exception being specific buy and sell
>newsgroups.
>
>So when people complain about your ads (and this particular one
>has been made a lot worse by the cross-posting, and the frequency of the
>same ad) it's because we do know that they are out of place. And given
>all that we have put into the newsgroup over the years, in

>terms of posting discussion, I think we have a little bit more
>to say on the matter than you, a relative newcomer.
>

Clipped to save massive amounts of bandwidth...
>
> Michael VE2BVW

If you are tired of me then add me to your kill filter....I won't
mind....really!

Tracy

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2854. Bird Wattmeter - differencs 75r vs 50r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 10:41:15 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0304160241.27add56d@posting.google.com>
Source record: 36107

Hello All,
can anyone tell what effect using a BIRD Model 4307 (75 Ohm) in a 50 ohm system would have on the readings one gets - I found out tonight (when I peeled back a sticker) that what I had thought was a 50R model was in fact the 75 ohm model 4307.

How much diffence would this make, and would it be frequency dependent, ie as the internal coupling elment approaches the lenght of the frequency being measured?

73 de VK3BFA Andrew

2855. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 13:47:31 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <V1dna.30044$c42.25733@fe01.atl2.webusenet.com>
Source record: 36108

> A scroll saw can also be used.
>
>

If you use any power tools to cut PCB material, be sure to wear a dust mask and something to keep the dust out of your eyes. Wash your hands when done. That fiberglass/epoxy dust is not something you want in your lungs or eyes, and it can make your skin itch.

Jim
N8EE

2856. Semiconductor Testers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 14:37:44 UTC
From: Paul Burridge <redscar@waitrose.notthisbit.com>
Message-ID: <bupq9vkh1visgc5pcj56djh1f5ns2livai@4ax.com>
Source record: 36111
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

I've seen some hand-held devices that claim to be able to display what the part is and its pin-outs simply by connecting it up any way around to the device's test probes. Has anyone here got one? I'm fed up with looking up pin-outs and fiddling with DVMs and would be happy to splash out the 60 quid or so most of these testers are priced at. Are they any good? And can they reliably determine the subtler differences between source and drain in all FETs, for example?

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

2857. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 14:41:55 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <E3ena.465$a46.75203@newsfep2-win.server.ntli.net>
Source record: 36110

> Any thoughts on cutting this stuff? I would just as soon cut off
> individual pieces as opposed to cutting it all up at once.
======
Being in the same situation like you with quite some PCB cut-offs ,also larger pieces to make project enclosures, I use an electric jig saw , followed by trimming with a circular stone grinding disc placed in a saw bench with cutting guide. This results in nicely straight square or rectangular pieces.
Final finish is with a fine file or abrasive paper.

For simple circuits I use PCB with 4 mm circular islands ,using a special 5 mm 'island drill' . The drill is in fact a small cylinder ,the outside and cutting edge covered with 'diamond grit' ,and fitted onto a 3 mm shank.
The island drill is placed in a small vertical drill stand for cutting any circuit PCB material
This method is very suitable for RF circuits since the islands are insulated from the circuit board earth plane by circular rings less than 1 mm wide.
With a bit of care using very little thin solder ,one 4 mm island can be the connecting point of up to 4 components leads . A pair of adjacent islands drilled at minimum distance can inter-connect up to 6 component leads.
I purchased a few 'island drills' through the QRP-community (G-QRP Club).

Frank gm0csz.kn6wh@ntlworld.com

2858. Re: Engineering specification required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 14:44:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7jq54$1ndmq$1@ID-150848.news.dfncis.de>
Source record: 36109

<ehsjr@bellatlantic.net> wrote in message
news:3E9B89E2.2AD89170@bellatlantic.net...
>
>
> Richard wrote:
> >
> > Say you have a meter that shows position of a variable capacitor in
a
> > remote atu.
> >
> > What would be reasonable accuracy of your meter, I mean, would it be
> > reasonable for the meter to show true shaft position within 1
degree, or
> > is that unnecessarily accurate? What would be reasonable accuracy?
TIA.
> > Rich.
>
> The capacitor position as viewed by the person using the
> ATU is only to get in the ball park. Once in the ball park,
> you tune by watching instrumentation, not the physical
> position indication of the cap, so I would say that 1%
> accuracy is tremendous overkill.
>
> I just looked at my manual ATU. There are 20 "tick marks"
> for 180 degrees capacitor rotation. Every other tick is
> numbered. When I tune, I put it on a number, then tweak,
> watching the SWR meter. Based on that, reasonable meter
> accuracy would be 9 degrees - i.e. within 1 tick mark.

I think you are right. Knowing the actual position of the capacitor shaft within a degree is overkill. What is more important is repeatability, ie you set your frequency and tune up, noting the meter position. As long as the meter position and the capacitor shaft position keep the same relationship, next time you want to transmit on the same frequency you should be able to pretty much set correct tune position by just getting the meter to read the same.

I reckon I ought to get rotation accuracy within 5 degrees, so when meter reads 20 (1/5th od 180 degrees) the capacitor shaft will be about 36 degrees +- 2 degrees. More important to get the end stops right, so when meter reads 0 the shaft is at 0 degrees, and when meter is 100, shaft is at 180 degrees. You can probably do that by adjusting preset resistors.

2859. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 15:56:49 UTC
From: Doug McDonald <mcdonald@scs.uiuc.edu>
Message-ID: <b7jug1$5h5$1@xuxa.iecc.com>
Source record: 36112
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

Floyd Davidson wrote:
>
> >
> >http://www.ptialaska.net/~jsteven2/tel/17-3.htm
>
> Phantom circuits and repeat coils are wonderfully fun things to
> play with. They make a lot of sense if you have a pair of
> leased lines and need one more. Or if you own the cable and
> would have to install a new 25 pair cable for a few miles.
>
> Repeat coils are actually very commonly available, except they
> will be called "hybrid transformer" instead, and they'll be much
> smaller than the coils discussed in the URL (which were designed
> in the 1930's).
>
> But between rooms? Running more cable is a *lot* less expensive
> and less trouble than trying to multiplex multiple channels.
> And if you do have an application where the distance is great
> enough to be worth the effort, digital multiplexing would be
> much preferred.

Anything in this sort of idea that can be done with these
coils can be done with cheap op-amps. Using these powered by a
cheap wall-wart can make it feasible for very short runs.

Doug McDonald

2860. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 17:11:08 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3E9D8ED6.6090906@earthlink.net>
Source record: 36113

Serge wrote:
> Hi , Bob
> You said : half-wave coax balun to convert the 50-ohm unbalanced 160 kW
> output from the driver transmitter to the push-pull amplifier
> yes, today , we using again this , to convert 50 to 200 in antennas feed .
> but 160 kW in a RG8 or 213 , is possible ? even if : 2 (in the 2 arms) ?
> 73's
> Serge
>
>

The 160 kW is peak power; Loran is a pulsed mode, although the duty cycle is relatively long compared to most radars. That peak power equates to about 2800 Vpk, well within the breakdown rating of RG-213/U or RG-8/U.

As I recall, the Loran pulse width was 45 ï¿½sec and the highest pulse rate was 33 pps. This equates to a duty cycle of about 0.0015, so that the average power in the coax was about 238 watts (160000*.0015).

Bob, W6NBI

2861. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 17:36:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304160936.1720050@posting.google.com>
Source record: 36114

I'm sorry, perhaps I should re-word what I previously wrote. I did
not mean to be a "policeman," only to voice my feelings. Try this:

I do not like ads in this group. I'm offended by them. I believe
others are also, as evidenced by what I read here. To me, it's a bit
like going to a library to read quietly, only to find someone loudly
reciting poetry in the middle of the reading room. Based on what the
original poster has been doing, I would say he's running a commercial
enterprise (albeit a small one) building coils, posting them on ebay,
and posting ads here. I urge him to stop that practice of posting his
ads here. If it continues, it may drive me and others away from this
group. I'm sorry, but killing things isn't an option for me. Flame
me if you wish for these feelings, but I'd ask, which is worth more to
this group, postings from bright and helpful folk like Wes Stewart,
or "FA" ads?

There are appropriate places for "FA" ads, but I happen to believe
this isn't one of them, any more than the reading room at the library
is an appropriate place for someone to be loud.

Cheers,
Tom

aruder@pipeline.com (Lou Hinshaw) wrote in message
news:<b7hsn5ibi2@slb0.atl.mindspring.net>...
> I don't know about internet police, but I do know I have a box of heavy air-core
> inductors, and that I have believed for years that they had something to do with
> HB radio.
>
> This is, I believe, one of hte things that drive people away from Amateur Radio:
> The number of people out there who have no idea what is going on, but who are
> eager to set the rules for everyone else.
>
> WB0NRU, since the mid 1970s, ex WB4YGX before then.
>
> k7itm@aol.com (Tom Bruhns) wrote:
>
> >Well, it _especially_ doesn't belong here in r.r.a.h. It looks to me
> >like he's making these things and putting them out for sale. I don't
> >mind an occasional one-off posting here for something like this, but
> >this looks commercial to me.
>
> >Cheers,
> >Tom
>

> >Wes Stewart <n7ws@#arrl.net> wrote in message
news:<2meg9v0oh3up18n3mmdmc6u9j1sf32hgir@4ax.com>...
> >> Give it up. Nobody wants this damn thing and you crossposting it to
> >> all of these groups every couple of days is getting annoying.
> >>
> >>
> >> On Sat, 12 Apr 2003 14:33:06 GMT, "ga_boneyard"
> >> <ga_boneyard@hotmail.com> wrote:
> >>
> >> |Please see:
> >> |
> >> |http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=x

2862. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 17:58:03 UTC
From: "Chris Cox, N0UK c c o x at u h c dot c o m" <spammers.c@n.bugger.off>
Message-ID: <b7k5jb$3c2$2@gabriel.uhc.com>
Source record: 36115

Our inrepid adventurer, Al Parker <anchor@ec.rr.com>, was last seen scribbling:
> Hi Serge,
> Way back in about 1957 I went to a club meeting in West Hartford, CT,
> home of the ARRL then, and Ed Tilton, of the ARRL, was the speaker. He
> showed a 2m phasing exciter he had built in which he used a length of coax
> for phasing the RF signal. Since the freq. only changed a very small
> percentage when QSY-ing, the phase changed an insignificant amount, and
> didn't need to be adjusted. It was only half wave, shortened by the
> velocity factor, and it was looped inside the chassis. It was a trick that
> impressed my teenage mind and has stuck with me. I don't know if that unit
> was ever published.
> 73,
> Al, W8UT

Al,

sounds very similar to a design that used to be published in the RSGB
VHF/UHF Manual.

IN that design, it used two lengths of coax (1/8 and 3/8 I think), to
provide the two RF signals separated by a 1/4 lambda delay line.

I remember speaking to someone that had tried reproducing the design,
but with very poor results.
--
Chris Cox, N0UK/G4JEC NIC Handle: CC345
UnitedHealthGroup, Inc., MN10-W116, UNIX Services & Consulting
6300 Olson Memorial Highway, Golden Valley, MN 55427
email: ccox@uhc.com (work) chrisc@chris.org (home)

2863. Re: Bird Wattmeter - differencs 75r vs 50r

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 18:00:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304161000.4f0ed17a@posting.google.com>
Source record: 36116

ablight@alphalink.com.au (Andrew VK3BFA) wrote in message
news:<1fc7b362.0304160241.27add56d@posting.google.com>...
> Hello All,
> can anyone tell what effect using a BIRD Model 4307 (75 Ohm) in a 50
> ohm system would have on the readings one gets - I found out tonight
> (when I peeled back a sticker) that what I had thought was a 50R model
> was in fact the 75 ohm model 4307.
>
> How much diffence would this make, and would it be frequency
> dependent, ie as the internal coupling elment approaches the lenght of
> the frequency being measured?

If the meter is calibrated properly to measure in a 75 ohm system,
then the readings you get will be relative to that 75 ohms. So if the
load is a 50 ohm line that happens to present a 75 ohm load where the
meter is connected (1:1.5 SWR in the _50_ ohm system), it will show no
reflected power on the meter. On the other hand, if the SWR in that
50 ohm system is 1:1, the 75 ohm meter will show a 1.5:1 SWR.
Unfortunately, it would also indicate a 1.5:1 SWR with a 112.5 ohm
resistive load, which would be 2.25:1 SWR in the 50 ohm system. So an
indicated 1.5:1 SWR could be anything between matched and 2.25:1 SWR
in the 50 ohm system it's hooked to. The meter can only respond to
the load which is connected to it; it knows nothing of the actual SWR
in the line it's connected to, since it doesn't know what the
impedance of that line is. If the meter indicated phase as well as
magnitude, you could use that info to find the SWR relative to any Zo
impedance you want, but I guess you only have magnitude available.
(All this could of course be re-worded in terms of indicated forward
and reflected power instead of SWR.)

If the meter isn't properly calibrated to measure in a 75 ohm system,
then you don't even have as much info as I suggested above...

Cheers,
Tom

2864. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 18:08:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <cg6r9v0mcna10ejm9kdanqlv9ug0foej07@4ax.com>
Source record: 36117

On 16 Apr 2003 10:36:37 -0700, k7itm@aol.com (Tom Bruhns) wrote:

|I'm sorry, perhaps I should re-word what I previously wrote. I did
|not mean to be a "policeman," only to voice my feelings. Try this:
|
|I do not like ads in this group. I'm offended by them. I believe
|others are also, as evidenced by what I read here. To me, it's a bit
|like going to a library to read quietly, only to find someone loudly
|reciting poetry in the middle of the reading room. Based on what the
|original poster has been doing, I would say he's running a commercial
|enterprise (albeit a small one) building coils, posting them on ebay,
|and posting ads here. I urge him to stop that practice of posting his
|ads here. If it continues, it may drive me and others away from this
|group. I'm sorry, but killing things isn't an option for me. Flame
|me if you wish for these feelings, but I'd ask, which is worth more to
|_this_ group, postings from bright and helpful folk like Wes Stewart,
|or "FA" ads?
|
|There are appropriate places for "FA" ads, but I happen to believe
|this isn't one of them, any more than the reading room at the library
|is an appropriate place for someone to be loud.
|
|Cheers,
|Tom

My sentiments exactly. Well said.

1) I don't have the ability to "kill" posts and even I did, if I killed every poster that I disagreed with at one time or another I would be reading a blank screen.

2) The posts in question probably violate the poster's ISP's TOS.

3) The posts made to look as if I originated them (along with the ineffective attempt to disguise the origin) most certainly violate the TOS of that child's ISP. When he gets booted off, I hope his daddy gives him a good spanking.

If you want to call me a cop, so be it. If you want to put me in your "kill file", your loss, not mine.

2865. 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 18:43:27 UTC
From: Mike Kulyk <kulykm@suffolk.lib.ny.us>
Message-ID: <dthna.7905$io.290816@iad-read.news.verio.net>
Source record: 36120
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

I am looking for a print of a 900 mhz baby monitor for possible use on the ham band.

Mike WB2GLW

2866. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 18:48:26 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ba9r9v8avgg31t0hj08vl7d3seu3q17i55@4ax.com>
Source record: 36118

A radial arm or table saw fitted with a masonry cutoff blade ("brick blade")
works quite well.

Jim

Bob Liesenfeld <wb0poq@visi.com>
shared these priceless pearls of wisdom:

->Hi gang,
-> I have several large (15"X15") pieces of PC board that I want to cut
->up
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2867. AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 19:35:21 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b7kbhf$7o9$1@nyytiset.pp.htv.fi>
Source record: 36119

Hi,

I've a AD9854 DDS running, but the output is very "wobbly" even after filtering. It runs at 200MHz (50MHz x 4). Low pass filtering at 50 MHz with a 3-pole C-LC. Even a 1 MHz DDS output the signal is very messy, with low frequency "wobble" content. Here are two scope traces to show what I mean:

http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470kHz-wobble-1.gif
http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470khz-wobble-2.gif
(the grey area is the afterglow you'd see on a CRT scope)

As the scope pics show, at 1.470 MHz the max phase noise (or, jitter...) is about 20ns peak-to-peak. Really horrible... The cheap 50MHz reference xtal oscillator which clocks the DDS is rock solid compared to these 20ns of jitter.

Shouldn't the DDS output show much less phase noise??

Esp. as the DDS reference clock jitter gets divided down into the output (t.ex. 50MHz=>1.47, 34:1 jitter reduction)?

Or is the 10nF 1.3kOhm PLL filter recommended in the AD9854 not "good enough"? I tried a poly cap + standard resistor combination, and later a chip cap + smd resistor, same result. Btw, analog and digital supply rails on the chip show <<20mV ripple or mess, so a bad layout or supply RF decoupling probably isn't be the problem here...

And - if someone has tried - is the output less jittery if directly clocking the AD9854 from t.ex. a 200MHz low-jitter SAW oscillator?

puzzled why it works so lousily...

- Jan

2868. Re: Sharing 1 wire in N balanced lines ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 20:56:16 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <b7kg1gal1@xuxa.iecc.com>
Source record: 36121
Cross-posted to: sci.electronics.misc,alt.radio.pirate,rec.radio.broadcasting,rec.radio.amateur.homebrew

Doug McDonald <mcdonald@scs.uiuc.edu> wrote:
>>
>> But between rooms? Running more cable is a *lot* less expensive
>> and less trouble than trying to multiplex multiple channels.
>> And if you do have an application where the distance is great
>> enough to be worth the effort, digital multiplexing would be
>> much preferred.
>
>
>Anything in this sort of idea that can be done with these
>coils can be done with cheap op-amps. Using these powered by a
>cheap wall-wart can make it feasible for very short runs.

That would be a *bad* mistake! The hybrid transformers are
nice, never fail, passive devices. Op-amps are active devices
requiring multiple components, all of which raises both the
failure rate and the cost. There is exactly one advantage to
using op-amps, and it would be an overpowering one if
multiplexing were actually necessary. That advantage is
amplitude distortion, where the op-amps are great and the hybrid
transformers are very restricted.

Regardless, between rooms in the same building????

Buy more wire. It is by far the better solution.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2869. Re: FA: Air Wound Coil - 32 uH -- 3" diam, AWG 10

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 21:07:17 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <4fhr9vcmir1a337gkfoq6sj09jje3pcltr@4ax.com>
Source record: 36122

Dosen't matter...I could care less if the posts are here or not. Like
I said, I don't mind them. I'm entitled to my opinion too. That
said...I don't post them so don't blame me as Mickael Black did. Bitch
at the person posting them.

On Wed, 16 Apr 2003 11:08:27 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On 16 Apr 2003 10:36:37 -0700, k7itm@aol.com (Tom Bruhns) wrote:
>
>|I'm sorry, perhaps I should re-word what I previously wrote. I did
>|not mean to be a "policeman," only to voice my feelings. Try this:
Get a better newsreader. Try something other than outlook express....

>1) I don't have the ability to "kill" posts and even I did, if I
>killed every poster that I disagreed with at one time or another I
>would be reading a blank screen.

I love the above statement....After reading most of your posts you
have disagreed with everybody!!!

>2) The posts in question probably violate the poster's ISP's TOS.

I doubt it!

>3) The posts made to look as if I originated them (along with the
>ineffective attempt to disguise the origin) most certainly violate the
>TOS of that child's ISP. When he gets booted off, I hope his daddy
>gives him a good spanking.
>
>If you want to call me a cop, so be it. If you want to put me in your
>"kill file", your loss, not mine.

Yeah right!

Tracy

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2870. Re: Pin out for PT31963 power transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 23:36:28 UTC
From: JBJohnson <jbjsabu@yahooNOT.com>
Message-ID: <7HIna.32429$c42.2650@fe01.atl2.webusenet.com>
Source record: 36123
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Neil" <nobody@nospam.net> wrote in message
news:b7ja49$p7n$1$8300dec7@news.demon.co.uk...
> Hi there,
>
> I'm trying desperately to find out the pin-out for a PT31963 RF power
> transistor. Can anyone help? I know which wires are the emitter & I'm
> presuming the small wire is the base, but not 100% sure!
>
> --
>
>
> Neil
> (Manchester, UK)
>
This is supposed to be a replacement (same?):
http://www.semiconductors.philips.com/acrobat/datasheets/BLY89C_CNV_2.pdf

2871. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-16 23:45:43 UTC
From: "Ed G." <Spectrumhog@_REMOVE_StarBand.net>
Message-ID: <Xns935FAAA9A5401Frog207Junocom@148.78.248.76>
Source record: 36124
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

:

> I am looking for a print of a 900 mhz baby monitor for possible
> use on the ham band.
>

What is a "900MHz Baby" ??

Ed :^)

2872. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 01:02:01 UTC
From: Virgil Smith <lmcoyle@attbi.com>
Message-ID: <d2nna.510152$S_4.555246@rwcrnsc53>
Source record: 36125

"Jan Wagner" <jwagner@cc.hut.fi> wrote in message
news:b7kbhf$7o9$1@nyytiset.pp.htv.fi...
> Hi,
>
> I've a AD9854 DDS running, but the output is very "wobbly" even
> after filtering. It runs at 200MHz (50MHz x 4). Low pass
> filtering at 50 MHz with a 3-pole C-LC. Even a 1 MHz DDS output
> the signal is very messy, with low frequency "wobble" content.
> Here are two scope traces to show what I mean:
>
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470kHz-wobble-
> 1.gif
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470khz-wobble-
> 2.gif
> (the grey area is the afterglow you'd see on a CRT scope)
>
> As the scope pics show, at 1.470 MHz the max phase noise (or,
> jitter...) is about 20ns peak-to-peak. Really horrible... The
> cheap 50MHz reference xtal oscillator which clocks the DDS is
> rock solid compared to these 20ns of jitter.
>
> Shouldn't the DDS output show much less phase noise??
>
> Esp. as the DDS reference clock jitter gets divided down into the
> output (t.ex. 50MHz=>1.47, 34:1 jitter reduction)?
>
> Or is the 10nF 1.3kOhm PLL filter recommended in the AD9854 not
> "good enough"? I tried a poly cap + standard resistor
> combination, and later a chip cap + smd resistor, same result.
> Btw, analog and digital supply rails on the chip show <<20mV
> ripple or mess, so a bad layout or supply RF decoupling probably
> isn't be the problem here...
>
> And - if someone has tried - is the output less jittery if
> directly clocking the AD9854 from t.ex. a 200MHz low-jitter SAW
> oscillator?
>
> puzzled why it works so lousily...
>
> - Jan
>
>
>
I've never used the AD9854, but I can tell you (having designed some

of these things) that Direct Digital Synthesizers in general
inherently suffer from phase noise. Think of how a DDS works:
At each clock pulse, a small phase increment is added to a register.
When the register overflows, that marks one cycle of output. Unless
the ratio of the input clock to the output frequency is an exact
integer number, the number of phase increments (i.e., clock cycles)
per output cycle will vary from one output cycle to another.

So, it's not surprising that you see 20 nsec of jitter with a 50 MHz
clock, since that is exactly one period of your clock.

If you really need low phase noise, you may have to use the DDS
output to drive a phase-locked loop. That's the usual way of cleaning
these things up. Or, if you're free to choose any clock frequency,
you will find that some frequencies (those which are integer
multiples of your output) give a much cleaner output than others.

Good Luck,

-vs-

2873. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 05:09:58 UTC
From: Malcolm Smith <malcolms@cyberone.com.au>
Message-ID: <3e9e3725$1@news.comindico.com.au>
Source record: 36126

1) I use my radial arm saw with standard wood blade on plastic and aluminium succesfully with a burr free cut - should also work on PC board.

2) However the solutuin I use with fibreglass PC board is to take material to a local metal shop who for a few dollars use their power guilotine. I have had strips cut from 1cm up. Cuts need no edge treatment.

Regards
Malcolm

Jim Weir <jim@rst-engr.com> wrote in message news:ba9r9v8avgg31t0hj08vl7d3seu3q17i55@4ax.com...
> A radial arm or table saw fitted with a masonry cutoff blade ("brick blade")
> works quite well.
>
> Jim
>
>
> Bob Liesenfeld <wb0poq@visi.com>
> shared these priceless pearls of wisdom:
>
> ->Hi gang,
> -> I have several large (15"X15") pieces of PC board that I want to cut
> ->up
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

2874. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 06:25:58 UTC
From: jo <rhaub@itctel.com>
Message-ID: <v9si7nikhvotfc@corp.supernews.com>
Source record: 36127

"S Fisher" <nospam@nospam.com> wrote in message
news:_mIma.27976$D31.3723267@news1.news.adelphia.net...
> Hi all,
>
> I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
> SRAM (6116) and am trying to remember the best way of handling the chip
> selects. I seem to remember something about slow EPROMS causing a problem?
>
> I have a schematic at http://sholtz.port5.com/z80.html which I think is
> correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
> 0800h - 0FFFh. But I would be pleased if anyone has any better
> suggestions/advice...
>
> S Fisher
> inbox at sholtz dot port5 dot com
>
>

Hi Fisher,

I imagine that you must have got the NAND circiut from a Zilog ap-note, I designed an SBC around a Z80180 once and this was not needed, although adimitedly I have never worked with 2716s or 6116s. I design SBCs for a living, my work can be seen at http://www.midwestmicro-tek.com any boards that are on that site are my designs. Your design looks ok but personly I would use 32k devices since they are easier to come by than the older '16 devices. 27C256 EPROM and 65256 RAM devices can be gotten from BG Micro for a few dollars each and you would not have to worry about slow access times. Also if you ever decide to move to an eprom emulator, which makes developing programs much faster and easier, they generaly only work for 28 pin EPROM devices (8k, 16k, 32k) and will not work with 24 pin devices. If you are interested in my Z180 design (that worked well and we sold for 8 years) and a design I have for the Z-80 (which I never got around prototypeing) send me an e-mail, I may still have a couple of old CDs with the schematics and the SBC manuals around some where. . . . . .

Rick KC0GIX

2875. Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 06:51:24 UTC
From: eniac@eniac.homelinux.com
Message-ID: <d002435e.0304162251.4b4b5017@posting.google.com>
Source record: 36128

Hi all.

I'm trying to rebuild an old FM transmitter with tubes, but i don't
have all necessary air-variable capacitor that the circuit needs.
So i think to build some myself from scratch because i found a little
in shops but these capacitors are very expencive.
I would like to build some AVC with 30pf and 50pf capacitance.
I would like to ask you for advice, ideas, or sites URLS with similar
projects.
As i said i haven't all necessary capacitos, the capacitors that i
have , are builded with porcelain.
As these capacitors will be work with RF, is it necessary to build
with porcelain ?
Is it ok to use PVC or similar material instead of porcelain ?

Thank you.
Eniac

2876. Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 12:40:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3e9e9fc5.440138385@news.online.no>
Source record: 36129

Hi

tried a search for intermediate frequency, zwischenfrequenz etc, but
didn't find the basic rules which were important back in the history
for choosing IF. Suppose the previous IF for USA was 465kHz, Denmark
447kHz, Germany 460-470kHz. The frequency was determined to avoid
heterodyne signals between two local transmitter, usually one on
longwave (150-350kHz) and another on medium wave (550-1600kHz)
broadcast bands

any suggestions?

Need the info for my site, see http://home.online.no/~la8ak/16j.htm

73
Jan-Martin

--
remove ,xnd to reply

2877. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 15:30:04 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v9ti47lg2t9l47@corp.supernews.com>
Source record: 36130

Find a ham radio swap meet, you can look on www.arrl.org
there will be all kins of capacitors..
also try ebay..
hank wd5jfr
"eniac" <eniac@eniac.homelinux.com> wrote in message
news:d002435e.0304162251.4b4b5017@posting.google.com...
> Hi all.
>
> I'm trying to rebuild an old FM transmitter with tubes, but i don't
> have all necessary air-variable capacitor that the circuit needs.
> So i think to build some myself from scratch because i found a little
> in shops but these capacitors are very expencive.
> I would like to build some AVC with 30pf and 50pf capacitance.
> I would like to ask you for advice, ideas, or sites URLS with similar
> projects.
> As i said i haven't all necessary capacitos, the capacitors that i
> have , are builded with porcelain.
> As these capacitors will be work with RF, is it necessary to build
> with porcelain ?
> Is it ok to use PVC or similar material instead of porcelain ?
>
> Thank you.
> Eniac

2878. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 15:31:38 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E9EC8C8.70804@invalid.invalid>
Source record: 36131

J M Noeding wrote:
> Hi
>
> tried a search for intermediate frequency, zwischenfrequenz etc, but
> didn't find the basic rules which were important back in the history
> for choosing IF. Suppose the previous IF for USA was 465kHz, Denmark
> 447kHz, Germany 460-470kHz. The frequency was determined to avoid
> heterodyne signals between two local transmitter, usually one on
> longwave (150-350kHz) and another on medium wave (550-1600kHz)
> broadcast bands

Actually 455KHz for most radios in the USA - 262KHz was frequently used in car radios, and more recently I see more 450 and 460KHz units.

We've never had a longwave broadcast band in North America.

FCC regulation 73.182(s) states in part:
"Additionally, in selecting a frequency, [for building a new station - ds] consideration should be given to the fact that occasionally the frequency assignment of two stations in the same area may bear such a relation to the intermediate frequency of some broadcast receivers as to cause "image" interference."

The regulation fails to specify any particular IF frequency though - and says that since such interference can be rectified by changing the receiver's IF (?! - obviously written in the 1930s...) the government won't take it into account when authorizing frequencies. They then, when establishing regulations for FM, *did* take a specific IF (10.7MHz) into account, establishing minimum distances between FM stations 10.6 or 10.8MHz apart. Similar regulations exist for analog TV, recognizing an IF of 41-47MHz.

I suspect 455KHz was chosen as a standard by the Radio Manufacturers Association so that broadcasters could predict what combinations (i.e. 540KHz & 1450KHz) might cause problems and avoid them.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2879. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 15:32:20 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.190868dfb34ad50b989870@192.168.42.131>
Source record: 36132
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

In article <dthna.7905$io.290816@iad-read.news.verio.net>,
kulykm@suffolk.lib.ny.us says...

> I am looking for a print of a 900 mhz baby monitor for possible use on the
> ham band.

Why in the Multiverse would anyone want to pollute ham frequencies
with something like a baby monitor?

Assuming that doing so would even be legal under Pt. 97...

--
Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

2880. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 15:53:31 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <48jt9v0qgmj6ej5u7ld1tkt4hphhps6s2b@4ax.com>
Source record: 36133

Actually, the common IF for AM broadcast band home receivers in the USA is 455 kHz., some early automobile radios used 262.5 kHz., FM broadcast band radios universally use 10.7 MHz., a common communications radio IF is 21.4 MHz., the TV broadcast receivers have an IF in the 45 MHz. range, and 70 MHz. is common for some cellphones and TVRO receivers.

Of course, any manufacturer is free to choose an IF of their own desires. I've used some oddballs in my time, but I stick to one of the standards (where parts are cheap) when I can.

Jim

la8ak.xnd@online.no (J M Noeding)
shared these priceless pearls of wisdom:

->Hi
->
->tried a search for intermediate frequency, zwischenfrequenz etc, but
->didn't find the basic rules which were important back in the history
->for choosing IF. Suppose the previous IF for USA was 465kHz,
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2881. Re: WTB:Inexpensive MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 16:08:21 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0304170808.4cda2b0@posting.google.com>
Source record: 36134

If building your own IS an option, take a look at this little
instrument:
http://www.qsl.net/kd1jv/rlb.HTM

I have not built it but it looks interesting and should be pretty
inexpensive to build.

As for keeping the batteries alive in the MFJ259, I keep a plug in the
external power jack when not in use. That disconnects the battery pack
so if the pushbutton gets pushed in it doesn't matter.
JBH

2882. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 16:15:56 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b7mjvsbol1@freenet9.carleton.ca>
Source record: 36135

"S Fisher" (nospam@nospam.com) writes:
> Hi all,
>
> I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
> SRAM (6116) and am trying to remember the best way of handling the chip
> selects. I seem to remember something about slow EPROMS causing a problem?
>
> I have a schematic at http://sholtz.port5.com/z80.html which I think is
> correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
> 0800h - 0FFFh. But I would be pleased if anyone has any better
> suggestions/advice...
>
> S Fisher
> inbox at sholtz dot port5 dot com
>
>
Of course, when the issue of slow EPROMs with CPUs came up,
the EPROMs did have slower access time.

Pete Stark once mentioned something about this, in one of
his articles about the SWTP's 6800. I can't remember the
detail, but he suggested leaving one of the pins enabled,
rather than selecting it when needed, which apparently got
rid of some of the delay time. Obviously, it would have to
be the output enable or chip enable. The former does not make
sense, unless the output actually doesn't work unless the
chip is enabled. Maybe this prompts someone to remember exactly
what the scheme was.

Michael VE2BVW

2883. Re: For Sale: 6LQ6 Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 17:21:16 UTC
From: vincentelectronics@erols.com
Message-ID: <be26fc90.0304170921.156df67c@posting.google.com>
Source record: 36136
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:<PlMla.6799$ij4.639278@twister.southeast.rr.com>...
> Why would anyone want one 6lq6?
For use in a television set such as a CTC38.
> "Skipp" <frankiegoestohollywoodbandmovie@yahoo.com> wrote in message
> news:b76qv1huo1@woodrow.ucdavis.edu...
> > Michael,
> >
> > Most of the people reading your ad feel the price is about $15 too much.
> >
> > cheers
> > skipp
> >
> >
> > : In rec.radio.cb Michael Feldt <feldtm@iquest.net> wrote:
> > : For Sale: 1 N.I.B. GE 6LQ6 tube. I have no use for this tube so I'm
> selling
> > : it on the newsgroups. Measures 7000 umhos on my Hickok 5539C tube tester
> > : where 5000 umhos is the miniman acceptable level. Tube has no shorts.
> $25
> > : which includes shipping in the contanintal USA.
>
> > : Michael Feldt
> > : feldtm@iquest.net
> > : www.indianaradios.com
> >
> >

2884. Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 17:39:29 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <2vpt9v40kv406hn07q5qtudpqk5vunas5c@4ax.com>
Source record: 36137

Anybody ever have a good experience with these folks?
Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2885. Literature on air-spaced variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 17:43:19 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7mp02$2kocu$1@ID-150848.news.dfncis.de>
Source record: 36138
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi.

I'm curious of what manufacturers literature says is the rated voltage of their variable air-spaced capacitors.

If you have some literature on air-spaced capacitors (like Jacksons Bros etc) then would you mind giving me the vane spacing and the rated voltage of the capacitor? In particular, I'm interested in what voltage is given for a 0.8mm (0.08cm or 0.031") spaced variable, but would be interested in wider or narrower spaced capacitors.

Thanks.

Rich.

2886. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 17:57:16 UTC
From: JC <w9jcm@NOSPAMsbcglobal.net>
Message-ID: <0WBna.347$ow.30682235@newssvr15.news.prodigy.com>
Source record: 36143
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

Of course its legal you guys are smoking something thats why you are a ham.
To experiment. Just like its legal to convert a cb to 10 meters or convernt
high speed computer links to use for ham links.
"Dr. Anton Squeegee" <SpammersAreVermin@dev.nul> wrote in message
news:MPG.190868dfb34ad50b989870@192.168.42.131...
> In article <dthna.7905$io.290816@iad-read.news.verio.net>,
> kulykm@suffolk.lib.ny.us says...
>
> > I am looking for a print of a 900 mhz baby monitor for possible use on
the
> > ham band.
>
> Why in the Multiverse would anyone want to pollute ham frequencies
> with something like a baby monitor?
>
> Assuming that doing so would even be legal under Pt. 97...
>
>
> --
> Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
> (Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com)
> kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
> "Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

2887. Re: Semiconductor Testers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 18:24:16 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <tiCdnTA7x-bLbwOjXTWcog@comcast.com>
Source record: 36139
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Just so you know TO3a's, TO247's and TO220's all look like they are cousins
but the Drain is sometimes where the Source should be !

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:bupq9vkh1visgc5pcj56djh1f5ns2livai@4ax.com...
>
> Hi,
>
> I've seen some hand-held devices that claim to be able to display what
> the part is and its pin-outs simply by connecting it up any way around
> to the device's test probes. Has anyone here got one? I'm fed up with
> looking up pin-outs and fiddling with DVMs and would be happy to
> splash out the 60 quid or so most of these testers are priced at. Are
> they any good? And can they reliably determine the subtler differences
> between source and drain in all FETs, for example?
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

2888. Re: Literature on air-spaced variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 18:29:26 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <1IJOYrDGKvn+EwMl@fslife.co.uk>
Source record: 36140
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Rich,

>I'm curious of what manufacturers literature says is the rated voltage
>of their variable air-spaced capacitors.
>
>If you have some literature on air-spaced capacitors (like Jacksons Bros
>etc) then would you mind giving me the vane spacing and the rated
>voltage of the capacitor? In particular, I'm interested in what voltage
>is given for a 0.8mm (0.08cm or 0.031") spaced variable, but would be
>interested in wider or narrower spaced capacitors.
Best I could do.

Amp UK gets some of his parts here.

So do I for one of my MW rigs:

http://www.mainlinegroup.co.uk/jacksonbrothers/

2000pf, 750v ï¿½20

Quality's good as are prices.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2889. Re: Literature on air-spaced variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 19:14:06 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7mua6$2jaci$1@ID-150848.news.dfncis.de>
Source record: 36141
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:1lJOYrDGKvn+EwMl@fslife.co.uk...

> http://www.mainlinegroup.co.uk/jacksonbrothers/

Ah, I see.

Air Gap (mm) Test Volts (Kv)

0.48 0.75 Peak
0.6 1 Peak
1.2 2 Peak
1.22 2 Peak
2.13 4 Peak
4.55 6.5 Peak

Air Gap (mm) Test volts (kv)

0.91 2
1.27 3
1.62 4
3.25 6

I wonder if the test volts refer to RMS quantity in bottom set of
figures.

2890. Re: Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 19:29:40 UTC
From: mikea@mikea.ath.cx
Message-ID: <b7mvb4$b73$1@puck.litech.org>
Source record: 36142

Tracy Fort <beerbarrel@cox.net> wrote:
> Anybody ever have a good experience with these folks?
> Tracy Fort

I bought some small pliers, hemostats, tuning tools, and O-scope
probes from them. All arrived reasonably quickly and in good order.
No gripes, but nothing to brag about, either.

--
Have you ever noticed how much "political correctness"
resembles a complete lack of a sense of humor?"
-- Master Tivar Moondragon, in rec.org.sca

2891. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 20:28:00 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <i93u9v04545ibi32olqdnsl4s5vpvokcqv@4ax.com>
Source record: 36144
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

On Thu, 17 Apr 2003 17:57:16 GMT, "JC" <w9jcm@NOSPAMsbcglobal.net>
wrote:

>"Dr. Anton Squeegee" <SpammersAreVermin@dev.nul> wrote in message
>news:MPG.190868dfb34ad50b989870@192.168.42.131...
>> In article <dthna.7905$io.290816@iad-read.news.verio.net>,
>> kulykm@suffolk.lib.ny.us says...
>>
>> > I am looking for a print of a 900 mhz baby monitor for possible use on
>the
>> > ham band.
>>
>> Why in the Multiverse would anyone want to pollute ham frequencies
>> with something like a baby monitor?
>>
>> Assuming that doing so would even be legal under Pt. 97...
>>
>Of course its legal you guys are smoking something thats why you are a ham.
>To experiment. Just like its legal to convert a cb to 10 meters or convernt
>high speed computer links to use for ham links.

On the one hand, it is quite legal to use modified or
built-from-scratch equipment on ham frequencies if you are licensed as
Technician or above.

On the other hand, you are responsible for making certain that there
are no spurious emissions that would interfere with other users or
equipment on any frequency.

Experimentation is part of the hobby.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2892. Re: Literature on air-spaced variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 20:34:30 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <+79sfSEW$wn+Ewda@fslife.co.uk>
Source record: 36145
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

>> http://www.mainlinegroup.co.uk/jacksonbrothers/

>I wonder if the test volts refer to RMS quantity in bottom set of
>figures.

If you contact Mainline and ask to be put in touch with the main man
down in Coulsdon, Surrey he'll answer your questions.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2893. Re: Literature on air-spaced variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 21:50:39 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7n7g9$2c7jt$1@ID-150848.news.dfncis.de>
Source record: 36146
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:+79sfSEW$wn+Ewda@fslife.co.uk...
>
> >> http://www.mainlinegroup.co.uk/jacksonbrothers/
>
> >I wonder if the test volts refer to RMS quantity in bottom set of
> >figures.
>
> If you contact Mainline and ask to be put in touch with the main man
> down in Coulsdon, Surrey he'll answer your questions.

There ought to be a standard rating for air-spaced capacitors. I'm
guessing that a 1Kv rated capacitor has a flashover voltage of about 2
Kv. Anway if you have 1Kv across the cap. you ought to just buy a 1Kv
rated capacitor.

2894. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:13:29 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <dGFna.2904$Hy1.444046@newssvr28.news.prodigy.com>
Source record: 36011
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

"Gary S." <Idontwantspam@net> wrote in message
news:i93u9v04545ibi32olqdnsl4s5vpvokcqv@4ax.com...
> On Thu, 17 Apr 2003 17:57:16 GMT, "JC" <w9jcm@NOSPAMsbcglobal.net>
> wrote:
>
> >"Dr. Anton Squeegee" <SpammersAreVermin@dev.nul> wrote in message
> >news:MPG.190868dfb34ad50b989870@192.168.42.131...
> >> In article <dthna.7905$io.290816@iad-read.news.verio.net>,
> >> kulykm@suffolk.lib.ny.us says...
> >>
> >> > I am looking for a print of a 900 mhz baby monitor for possible use
on
> >the
> >> > ham band.
> >>
> >> Why in the Multiverse would anyone want to pollute ham frequencies
> >> with something like a baby monitor?
> >>
> >> Assuming that doing so would even be legal under Pt. 97...
> >>
> >Of course its legal you guys are smoking something thats why you are a
ham.
> >To experiment. Just like its legal to convert a cb to 10 meters or
convernt
> >high speed computer links to use for ham links.
>
> On the one hand, it is quite legal to use modified or
> built-from-scratch equipment on ham frequencies if you are licensed as
> Technician or above.
>
> On the other hand, you are responsible for making certain that there
> are no spurious emissions that would interfere with other users or
> equipment on any frequency.
>
> Experimentation is part of the hobby.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

The hard part is getting your baby to say your call sign every
10 minutes for a station id so you can stay legal.

Regards,
Bruce

2895. project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:31:15 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <JPFna.43657$Y57.28267@fe05.atl2.webusenet.com>
Source record: 35997

I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
radios audio in parallel, so how can it be done? A mixer ... too expensive.

Can I take a project box and three isolation transformers to do the trick? Browsing through an electronics catalog I saw a
'telephone' transformer which is 600 ohms primary and 600 ohms secondary. It is small and inexpensive. Could three of these be used
to 'mix' all three radio's to one speaker?

Am I on the right track with this or is there another (inexpensive) way?

Thanks,
Vic

2896. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:52:21 UTC
From: jgboyles@aol.com
Message-ID: <20030417185221.18935.00000171@mb-m07.aol.com>
Source record: 35999

Do you want to listen to all the radios at the same time? Seems like you would like to hear only one at a time.
>I would like to connect three radios to ONE amplified speaker

If you wish to hear only a selected radio at a time, get an selector switch (cheap) and feed only one radio to the amp speaker.
>So far as I know it would not be good to simply connect all three
>radios audio in parallel,

Yes, then you would hear all three at once, and possibly damage the output stages of the radios.

>Can I take a project box and three isolation transformers to do the trick?

Just get a selector switch, rotarary or otherwise, preferably one that would terminate the unselected radios in their desired output impedance. If you take 3 isolation transformers and connect them all together to feed an amplified speaker then you will hear all at once.

73 Gary N4AST

2897. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:53:22 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e9f3028$0$134$edfadb0f@dtext02.news.tele.dk>
Source record: 35998

Hello Vic

> I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
> radios audio in parallel, so how can it be done? A mixer ... too expensive.

Why not use a mixer, should cost only a few $ to make

See http://devices.sapp.org/circuit/mixer/

http://www.lh-electric.4t.com/bin/mix1.gif

http://www.all-electric.com/schematic/simp_mix.htm

Regards Max

2898. Re: U310 Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:54:28 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <rjGna.119$I43.1213@news1.mts.net>
Source record: 36001

If you run out, Steve, and don't want to go the mail order route, try checking your local Future/Active Electronics. Yes the one here in the 'Peg is still open.

Kent VE4KEH

"Steve McDonald" <jsm@gulfislands.com> wrote in message news:v9etfss6trvqcd@corp.supernews.com...
> Anyone know of a source for this JFET?
>
> VE7SL

2899. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 22:57:06 UTC
From: Ralph Lane <rlane7301@comcast.net>
Message-ID: <mYOdnfeg4vyirAKjXTWcqg@comcast.com>
Source record: 36000

Suggest you use an opamp with three inputs through series resistors to neg input and resistor feedback. All four resistors could be variable. 3 individual gains and one master gain.
"Vic" <nospam@bogusaddress.com> wrote in message news:JPFna.43657$Y57.28267@fe05.atl2.webusenet.com...
> I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
> radios audio in parallel, so how can it be done? A mixer ... too expensive.
>
> Can I take a project box and three isolation transformers to do the trick? Browsing through an electronics catalog I saw a
> 'telephone' transformer which is 600 ohms primary and 600 ohms secondary. It is small and inexpensive. Could three of these be used
> to 'mix' all three radio's to one speaker?
>
> Am I on the right track with this or is there another (inexpensive) way?
>
> Thanks,
> Vic
>
>
>

2900. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 23:00:06 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <ycGna.21319$fE.1272@fe04.atl2.webusenet.com>
Source record: 36002

Gary asked:
> Do you want to listen to all the radios at the same time?

Yes ... one is a scanner which would interrupt only occasionally

Plus, I would like the convenience of NOT having to switch every time between radios.

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030417185221.18935.00000171@mb-m07.aol.com...
> Do you want to listen to all the radios at the same time? Seems like you would
> like to hear only one at a time.
> >I would like to connect three radios to ONE amplified speaker
>
> If you wish to hear only a selected radio at a time, get an selector switch
> (cheap) and feed only one radio to the amp speaker.
> >So far as I know it would not be good to simply connect all three
> >radios audio in parallel,
>
> Yes, then you would hear all three at once, and possibly damage the output
> stages of the radios.
>
> >Can I take a project box and three isolation transformers to do the trick?
>
> Just get a selector switch, rotarary or otherwise, preferably one that would
> terminate the unselected radios in their desired output impedance. If you take
> 3 isolation transformers and connect them all together to feed an amplified
> speaker then you will hear all at once.
>
> 73 Gary N4AST

2901. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 23:12:52 UTC
From: "Ed G." <Spectrumhog@_REMOVE_StarBand.net>
Message-ID: <Xns9360A51986CB8Frog207Junocom@148.78.248.76>
Source record: 36003
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

```
.
>
> On the other hand, you are responsible for making certain that
> there are no spurious emissions that would interfere with other
> users or equipment on any frequency.
>

Yes. Enjoy your newly modified "Baby Monitor" transmitter. But
PLEASE, keep the baby off it!

Ed
```

2902. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 23:32:23 UTC
From: jgboyles@aol.com
Message-ID: <20030417193223.18935.00000179@mb-m07.aol.com>
Source record: 36004

Sorry, you have redifined the problem.
>Yes ... one is a scanner which would interrupt only occasionally
>
>Plus, I would like the convenience of NOT having to switch every time between
>radios.

Well, then you must assign a proirity to each radio, and decide which one gets sent to the amplified speaker when one breaks the squelch. This is not simple or cheap.
73 Gary N4AST

2903. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 23:42:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3e9f11b1.469307153@news.online.no>
Source record: 36005

Thanks for info.

It is interesting that it is at least an FCC document to quote, so it may seem to be a reason. Wonder if it is CEPT or CCIR documents for this area... But suppose it wasn't so easy to align the IF dependent on where you lived. 465 was standard IF in USA before 1940, and 455kHz seems to be the normal after 1940, as it would be in Europe after 1950 (or 1960).
It seems that some differences may have occured earlier, but when models were exported to one region to another the standard would be normalized to 455kHz.
Seems that Philips used 130kHz for their early radios.

The problem is outlined as follows. If you have two stations in an area, one at 600kHz, the local oscillator is 1055kHz and you can't have another for the same area on this frequency, because of beat tones between the local osc from neighbour receivers and the station you are listening to. LO radiation from broadcast receivers are quite infame.

Suppose the European problem is like, if your local station is on 200kHz, the image frequency is 910kHz above = 1110kHz, suppose it was American Forces Network in Bremerhafen(?) back in the 60's, and BBC2 on 200kHz, two of the most popular stations in North Europe. Some problems may have dissappeared when medium wave stations changed to 9kHz channel distance, seems to be the same for LW since BBC2 moved from 200 to 198kHz

73
Jan-Martin, LA8AK, http://home.online.no/~la8ak/

On Thu, 17 Apr 2003 15:31:38 GMT, Doug Smith W9WI
<w9wi@invalid.invalid> wrote:

>J M Noeding wrote:
>> Hi
>>
>> tried a search for intermediate frequency, zwischenfrequenz etc, but
>> didn't find the basic rules which were important back in the history
>> for choosing IF. Suppose the previous IF for USA was 465kHz, Denmark
>> 447kHz, Germany 460-470kHz. The frequency was determined to avoid
>> heterodyne signals between two local transmitter, usually one on
>> longwave (150-350kHz) and another on medium wave (550-1600kHz)
>> broadcast bands
>
>Actually 455KHz for most radios in the USA - 262KHz was frequently used

>in car radios, and more recently I see more 450 and 460KHz units.
>
>We've never had a longwave broadcast band in North America.
>
>FCC regulation 73.182(s) states in part:
>"Additionally, in selecting a frequency, [for building a new station -
>ds] consideration should be given to the fact that occasionally the
>frequency assignment of two stations in the same area may bear such a
>relation to the intermediate frequency of some broadcast receivers as to
>cause "image" interference."
>
>The regulation fails to specify any particular IF frequency though - and
>says that since such interference can be rectified by changing the
>receiver's IF (?! - obviously written in the 1930s...) the government
>won't take it into account when authorizing frequencies. They then,
>when establishing regulations for FM, *did* take a specific IF (10.7MHz)
>into account, establishing minimum distances between FM stations 10.6 or
>10.8MHz apart. Similar regulations exist for analog TV, recognizing an
>IF of 41-47MHz.
>
>I suspect 455KHz was chosen as a standard by the Radio Manufacturers
>Association so that broadcasters could predict what combinations (i.e.
>540KHz & 1450KHz) might cause problems and avoid them.
>--
>Doug Smith W9WI
>Pleasant View (Nashville), TN EM66
>http://www.w9wi.com
>

--
remove ,xnd to reply

2904. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-17 23:47:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304171547.70252b29@posting.google.com>
Source record: 36006

...
> The regulation fails to specify any particular IF frequency though - and
> says that since such interference can be rectified by changing the
> receiver's IF (?! - obviously written in the 1930s...) the government
> won't take it into account when authorizing frequencies. They then,
> when establishing regulations for FM, *did* take a specific IF (10.7MHz)
> into account, establishing minimum distances between FM stations 10.6 or
> 10.8MHz apart.
...

Though, of course, the image will be 2*10.7MHz = 21.4MHz away from the
desired. On the other hand, I'd just as soon not be listening to the
LO of my neighbor's radio instead of to the station I want to receive.
With the density of FM stations in metropolitan areas, I wonder if
that minimum distance rule is followed, though.

Cheers,
Tom

2905. Re: Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 00:28:31 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <iwydnebyHvow2wKjXTWcpQ@comcast.com>
Source record: 36007

I've ordered a couple of times. It took about ten days to get the order, and I'm only about 500 miles away. The goods and prices were satisfactory and I would order again.

Tom, N3IJ

"Tracy Fort" <beerbarrel@cox.net> wrote in message news:2vpt9v40kv406hn07q5qtudpqk5vunas5c@4ax.com...
> Anybody ever have a good experience with these folks?
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2906. Re: Semiconductor Testers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 00:29:34 UTC
From: Trevor Wilson <trevor@rageaudio.com.au>
Message-ID: <3e9f4709$0$2018$afc38c87@news.optusnet.com.au>
Source record: 36009
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Paul Burridge" <redscar@waitrose.notthisbit.com> wrote in message
news:bupq9vkh1visgc5pcj56djh1f5ns2livai@4ax.com...
>
> Hi,
>
> I've seen some hand-held devices that claim to be able to display what
> the part is and its pin-outs simply by connecting it up any way around
> to the device's test probes. Has anyone here got one? I'm fed up with
> looking up pin-outs and fiddling with DVMs and would be happy to
> splash out the 60 quid or so most of these testers are priced at. Are
> they any good? And can they reliably determine the subtler differences
> between source and drain in all FETs, for example?
>

**If you mean the atlas tester, by Peak Instruments, then YES, YES, YES! It is an outstanding bargain for anyone dealing with a wide variety of semis, every day. It is fast and pretty much foolproof. It does have some difficulties with transistors which are diode protected, or those with internal resistors, but it reports that this is the case, so you can make allowances, accordingly.

Highly recommended.

--
Trevor Wilson
www.rageaudio.com.au

2907. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 00:30:22 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EA09970.DE3E938A@rica.net>
Source record: 36008

Vic wrote:
>
> I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
> radios audio in parallel, so how can it be done? A mixer ... too expensive.
>
> Can I take a project box and three isolation transformers to do the trick? Browsing through an electronics catalog I saw a
> 'telephone' transformer which is 600 ohms primary and 600 ohms secondary. It is small and inexpensive. Could three of these be used
> to 'mix' all three radio's to one speaker?
>
> Am I on the right track with this or is there another (inexpensive) way?
>
If the signal commons of all the radios can be connected without screwing up the power supplies, then you can make a simple resistive mixer and put the result into a powered speaker like those made for computers. If the grounds must be isolated, than you could add one of those isolation signal transformers in each signal poath before the resistive mixer. But you should amplify to speaker volume after mixing.

--
John Popelish

2908. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 00:48:24 UTC
From: redmondj <redmondj@concentric.net>
Message-ID: <3E9F4B6E.8060902@concentric.net>
Source record: 36010

Vic,

If you have the speaker output of each radio, just put an eight or four ohm resistor across the speaker output of each radio, tie the ground sides together, assuming that they have a common ground and then put about a 50 ohm resistor from each hot side to the input of your amplified speaker and use the common ground to the ground side of your speaker. The 51 ohm resistors will provide enough isolation to each radio, and you don't even need a power supply.

73, Alan - K6RFK

Vic wrote:

>I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
>radios audio in parallel, so how can it be done? A mixer ... too expensive.
>
>Can I take a project box and three isolation transformers to do the trick? Browsing through an electronics catalog I saw a
>'telephone' transformer which is 600 ohms primary and 600 ohms secondary. It is small and inexpensive. Could three of these be used
>to 'mix' all three radio's to one speaker?
>
>Am I on the right track with this or is there another (inexpensive) way?
>
>Thanks,
>Vic
>
>
>

2909. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 00:50:04 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1908eb9ad91fb31989872@192.168.42.131>
Source record: 36012

In article <JPFna.43657$Y57.28267@fe05.atl2.webusenet.com>,
nospam@bogusaddress.com says...

> I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
> radios audio in parallel, so how can it be done? A mixer ... too expensive.

By who's definition? Op-amps are not difficult to work with, nor
are they particularly expensive. Seems like a few hours of design effort
could do everything you need.

What I'm doing for my van, since I have multiple transceivers and a
scanner, is adapting a surplus aircraft audio panel to the task. It has
several inputs, and is designed to drive either a single speaker or a
couple of headsets. I bought it on Ebay for about $50, and got the manual
for it (which included full schematics) for another $30 or so from the
manufacturer.

You may want to try the same thing. But, as others have pointed
out, the 'priority' scheme you seem to want will not be easy or cheap to
implement.

--
Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

2910. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 01:05:50 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9F4F6E.80808@bellsouth.net>
Source record: 36013

Jim Weir wrote:
> Actually, the common IF for AM broadcast band home receivers in the USA is 455
> kHz., some early automobile radios used 262.5 kHz., FM broadcast band radios
> universally use 10.7 MHz., a common communications radio IF is 21.4 MHz., the TV
> broadcast receivers have an IF in the 45 MHz. range, and 70 MHz. is common for
> some cellphones and TVRO receivers.
>
> Of course, any manufacturer is free to choose an IF of their own desires. I've
> used some oddballs in my time, but I stick to one of the standards (where parts
> are cheap) when I can.
>
> Jim
>
>
>
> la8ak.xnd@online.no (J M Noeding)
> shared these priceless pearls of wisdom:
>
> ->Hi
> ->
> ->tried a search for intermediate frequency, zwischenfrequenz etc, but
> ->didn't find the basic rules which were important back in the history
> ->for choosing IF. Suppose the previous IF for USA was 465kHz,
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

455khz (though 456 and 465 were also used) became common when cheap
radios without an
rf stage (AA5's) came into being. Before that 175khz, 230khz, 260khz
were also common, usually
in radios with an rf stage. Since auto radios typically always have an
rf stage a lower IF was common,
hence 262khz. The lower IF yeilds greater selectivity, and since auto
radios often find themselves in
areas with weak signals, or with stations close together in frequency
the combo of an rf stage and
a more selective IF was a good idea.

Strange that the 21.4 if is twice 10.7 mhz (why did that get chosen?)
Also 11.7mhz is a common if in vhf radios, a Standard
2 meter hand held I used to have used that IF.

2911. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 01:09:58 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3E9F5066.1000101@bellsouth.net>
Source record: 36014

Michael Black wrote:
> "S Fisher" (nospam@nospam.com) writes:
>
>>Hi all,
>>
>>I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
>>SRAM (6116) and am trying to remember the best way of handling the chip
>>selects. I seem to remember something about slow EPROMS causing a problem?
>>
>>I have a schematic at http://sholtz.port5.com/z80.html which I think is
>>correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
>>0800h - 0FFFh. But I would be pleased if anyone has any better
>>suggestions/advice...
>>
>>S Fisher
>>inbox at sholtz dot port5 dot com
>>
>>
>
> Of course, when the issue of slow EPROMs with CPUs came up,
> the EPROMs did have slower access time.
>
> Pete Stark once mentioned something about this, in one of
> his articles about the SWTP's 6800. I can't remember the
> detail, but he suggested leaving one of the pins enabled,
> rather than selecting it when needed, which apparently got
> rid of some of the delay time. Obviously, it would have to
> be the output enable or chip enable. The former does not make
> sense, unless the output actually doesn't work unless the
> chip is enabled. Maybe this prompts someone to remember exactly
> what the scheme was.
>
> Michael VE2BVW
>
>

Leave the chip select enabled and gate the output enable pin with and
and of
the address decode and the read signal. This will net you and extra 10-50ns
of access time advantage.

Don't gate the memsel signal with the read strobe. Combine the address
decode
with the memsel signal. This will also net you a few ns advantage.

2912. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 01:30:05 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <5lku9vg49fobftdj5fshepodht3p2ua61e@4ax.com>
Source record: 36015

On Tue, 15 Apr 2003 17:59:47 -0500 Bob Liesenfeld <wb0poq@visi.com>
wrote:

> Any thoughts on cutting this stuff? I would just as soon cut off
>individual pieces as opposed to cutting it all up at once.

If you can find a machine shop that will let you use their shear, that
is the best way to cut the stuff.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

2913. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 02:02:21 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3E9F5CAD.59A8F28E@visi.com>
Source record: 36016

Thanks to all for the info! I think I'll follow up on the machine shop idea.

72

Bob L. WB0POQ

2914. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 02:05:00 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <g3Jna.65912$ja4.4352682@bgtnsc05-news.ops.worldnet.att.net>
Source record: 36017

Yes, but don't mention that cutting that fiberglas material is very hard on
cutting blades... lol

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

> If you can find a machine shop that will let you use their shear, that
> is the best way to cut the stuff.

2915. WTB:Tri Band Beam

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 04:21:33 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <h3Lna.29881$4P1.2702845@newsread2.prod.itd.earthlink.net>
Source record: 36018
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Wanted to buy a tri band or more beam.Prefer economical model and can pick
up within 150 miles of
Joplin,Missouri.
Please state model condition and price.
THANKS !!

2916. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 04:41:48 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <ub0v9vgopeppsu6q14e89lddmvj38seur3@4ax.com>
Source record: 36019
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

On Thu, 17 Apr 2003 22:13:29 GMT, "Bruce Raymond" <raymondb@dma.org>
wrote:

>"Gary S." <Idontwantspam@net> wrote in message
>news:i93u9v04545ibi32olqdnsl4s5vpvokcqv@4ax.com...

>> On the other hand, you are responsible for making certain that there
>> are no spurious emissions that would interfere with other users or
>> equipment on any frequency.
>>
>The hard part is getting your baby to say your call sign every
>10 minutes for a station id so you can stay legal.
>
You just have to carefully pick your vanity call sign.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2917. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 05:19:40 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E9F8AD1.4040109@invalid.invalid>
Source record: 36020

J M Noeding wrote:
> It is interesting that it is at least an FCC document to quote, so it
> may seem to be a reason. Wonder if it is CEPT or CCIR documents for
> this area... But suppose it wasn't so easy to align the IF dependent
> on where you lived. 465 was standard IF in USA before 1940, and 455kHz
> seems to be the normal after 1940, as it would be in Europe after 1950
> (or 1960).

Well, I got curious<grin>. I have a reprint of a Supreme Publications book "Most-Often-Needed 1926-1938 Radio Diagrams, Volume One". It contains service information for American radios in this timeframe, including circuit diagrams.

The IFs most often quoted:

456 42
175 30
465 22
460 17
262 12
450, 455, 470 9 ea.
260 7
181.5 5
177.5, 252.5, 2 ea.
472.5, 262.5,
264, 370, 130
448, 485 1 ea.

Of course this covers a lot of time. 175KHz seems to have been used more often in the earlier part of the period. There aren't that many car radios in this book; a lot of the use of frequencies near 262KHz was in home radios.

Unfortunately I don't have any more recent diagrams - I do have a TV book for 1948; one 1948 TV set had a built-in MW radio which used 455KHz.

> It seems that some differences may have occured earlier, but when
> models were exported to one region to another the standard would be
> normalized to 455kHz.
> Seems that Philips used 130kHz for their early radios.

I don't see that there was much export of radios to the USA before 1945. Best I can tell all the radios mentioned in this book were made in America.

> The problem is outlined as follows. If you have two stations in an
> area, one at 600kHz, the local oscillator is 1055kHz and you can't

> have another for the same area on this frequency, because of beat
> tones between the local osc from neighbour receivers and the station
> you are listening to. LO radiation from broadcast receivers are quite
> infame.
>
> Suppose the European problem is like, if your local station is on
> 200kHz, the image frequency is 910kHz above = 1110kHz, suppose it was
> American Forces Network in Bremerhafen(?) back in the 60's, and BBC2
> on 200kHz, two of the most popular stations in North Europe. Some
> problems may have dissappeared when medium wave stations changed to
> 9kHz channel distance, seems to be the same for LW since BBC2 moved
> from 200 to 198kHz

Even if you don't have a LW band, this problem can happen within the MW band as well. Admittedly on only five channel pairs (550/1460, 560/1470, 570/1480, 580/1490, 590/1500) until early 1941 when the top of the band was expanded to 1600KHz here. And of course, we never adopted 9KHz channel spacing.

There is a second potential problem: that of two stations separated in frequency by the IF mixing within the receiver and being demodulated regardless of the setting of the LO. For example, if you had a radio with a 460KHz IF and strong stations on 600 and 1060KHz, they could mix to form a 460KHz signal that could be heard across the entire dial. I suppose the desire to use an IF halfway between two channels would minimize (but not eliminate) this problem. (why 456KHz instead of 455?)

Apparently LO radiation was a serious problem for early television receivers. (many didn't have RF amplifiers, so there was little isolation between the mixer and the antenna) I understand that was in large part the reason the standard TV IF was changed from 21-27MHz to 41-47. (interference from the new 15m ham band being a secondary reason)

Today, I still have some trouble with it on FM. I have relatively exotic tastes in music and am relatively likely to listen to weaker stations in the car. It is not unusual for the station I'm listening to disappear as I pull up to a traffic light. When that happens, I quickly realize it's related to a specific car - and quickly realize there's a strong station 10.6 or 10.8MHz away from the one I'm listening to...
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2918. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 05:20:56 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3E9F8B31.9070100@invalid.invalid>
Source record: 36021

Tom Bruhns wrote:
> With the density of FM stations in metropolitan areas, I wonder if
> that minimum distance rule is followed, though.

I'm not aware of any exceptions in the USA, though that doesn't mean
there aren't any..
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2919. Huge group for transmitter and radio freaks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 06:59:45 UTC
From: Dutch Short-Wave association <alinter@alwaysaccess.nl>
Message-ID: <b7o7ov$3sf$1@hermes.castel.nl>
Source record: 36022

Huge group for transmitter and radio freaks

that like to repair our build the radio or transmitter theirselves. Also ham stuff and heaps of other stuff. Join up for free,
Share info, tips, tricks, schematics, I my self wil ad new schematics every month and i think a lot of members wil do the same.
Greetings from the moderator Alfred

here the groups adress

http://groups.yahoo.com/group/The_Radio_and_Transmitter_Electronics

We also hope you can ad a link to this group.
As you know. how more members we have the more powerfull and usseble the group will be for their members...
P.S. Don't forget to join up!!

Group Email Addresses

Post message: The_Radio_and_Transmitter_Electronics@yahoogroups.com
Subscribe: The_Radio_and_Transmitter_Electronics-subscribe@yahoogroups.com
Unsubscribe:
The_Radio_and_Transmitter_Electronics-unsubscribe@yahoogroups.com
List owner: The_Radio_and_Transmitter_Electronics-owner@yahoogroups.com

2920. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 07:11:08 UTC
From: cwsouth@telusplanet.net
Message-ID: <9cdfd499.0304172311.7afde273@posting.google.com>
Source record: 36023

Bob Liesenfeld <wb0poq@visi.com> wrote in message news:<3E9C8EE3.26324F8@visi.com>...
> Hi gang,
> I have several large (15"X15") pieces of PC board that I want to cut
> up into something like 4"X2" strips for some 'dead bug' projects. I have
> been struggling with tin snips, but on pieces this big, they just don't
> cut it (sorry).
>
> Any thoughts on cutting this stuff? I would just as soon cut off
> individual pieces as opposed to cutting it all up at once.
>
> Tnx es 72
> Bob WB0POQ

Hi Bob:

Getting the boards cut up at a machine shop using a shear is real handy.

I found that the use of a jeweler's saw has been a godsend for small work.
It takes a bit to learn to use one, but the cuts can be small in width.

I also use it for small parts fabrication in copper. aluminum, and silver(hey!).
The blades are more fragile than hacksaw blades. It provides for much greater control over a hacksaw or Jig saw.

Cutting being performed on the pull or down stroke. Like a Japanese saw.

For routing out slots or separations, I use Vanadium steel dental burs in my Dremel, works great for separations of pads for "Dead Bug" fabrication.

Best regards
Clark Southoff
Calgary, Alberta

2921. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 08:02:48 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <b7obf8rcb1@hercules.btinternet.com>
Source record: 36024

I think the technique you are looking for was to permanently enable the chip select (CS) and activte the PROM by toggling the output enable (OE) which is quite fast.
regards
Alan

"S Fisher" <nospam@nospam.com> wrote in message
news:_mIma.27976$D31.3723267@news1.news.adelphia.net...
> Hi all,
>
> I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a 2k
> SRAM (6116) and am trying to remember the best way of handling the chip
> selects. I seem to remember something about slow EPROMS causing a problem?
>
> I have a schematic at http://sholtz.port5.com/z80.html which I think is
> correct and should give me a ROM range of 0000h - 07ffh and a RAM range of
> 0800h - 0FFFh. But I would be pleased if anyone has any better
> suggestions/advice...
>
> S Fisher
> inbox at sholtz dot port5 dot com
>
>

2922. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 08:31:28 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0304180031.5598f588@posting.google.com>
Source record: 36025

Hi Eniac,
look at http://hamradio.online.ru/cap2.htm The variable capacitor has a semi-cylindrical shape of electrodes. IMHO, its construction can be simplified even more, if one makes the rotor from a glass tube with copper or aluminum foil glued inside and the stator from a piece of metal tube or sheet metal. The capacitance would be changed by rotating the glass tube in the stator.

73 Ivan OK1SIP

2923. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 11:20:05 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e9fdf2a$0$123$edfadb0f@dtext02.news.tele.dk>
Source record: 36026

Hello Eniac

> So i think to build some myself from scratch because i found a little
> in shops but these capacitors are very expencive.

Try looking at this
http://www.jogis-roehrenbude.de/Bastelschule/Drehko-Eigenbau.htm

> As these capacitors will be work with RF, is it necessary to build
> with porcelain ?
> Is it ok to use PVC or similar material instead of porcelain ?

Beware of the problem that can be with PVC if it is colored the dye that
is used is often metal based. Using acryl is a good solution and is
more mechanical stabel than PVC.
To test if a material is OK for RF, try it in a microwaveoven together with
a glass of water, if it gets hot it is not good for RF.

Regards Max

2924. Re: Huge group for transmitter and radio freaks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 14:45:08 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1909af4ef752e445989873@192.168.42.131>
Source record: 36027

In article <b7o7ov$3sf$1@hermes.castel.nl>, alinter@alwaysaccess.nl
says...

> Huge group for transmitter and radio freaks

<snip>

> http://groups.yahoo.com/group/The_Radio_and_Transmitter_Electronics

<snip again>

FWIW: You may want to find a different list host. A lot of sites,
mine included, block all traffic from Yahoo Groups because Yahoo's
response to spam from same is lacking at best. As I recall, chunks of
Yahoo's IP space are also listed in the SPEWS database, which means any
ISP that uses SPEWS will not receive traffic from any listed Yahoo site.

Good luck.

--
Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

2925. Re: Intermediate frequency, need basic info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 15:11:08 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3EA01585.6040303@invalid.invalid>
Source record: 36028

Doug Smith W9WI wrote:
> Even if you don't have a LW band, this problem can happen within the MW
> band as well. Admittedly on only five channel pairs (550/1460,
> 560/1470, 570/1480, 580/1490, 590/1500) until early 1941 when the top of
> the band was expanded to 1600KHz here. And of course, we never adopted

(you would think they could have used an IF close to 530KHz which would
have moved the image frequency out of the broadcast band)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2926. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 16:17:48 UTC
From: * Je Forget !!! <nospam@nospam.org>
Message-ID: <BAC59D6C.E923%nospam@nospam.org>
Source record: 36029
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

Instead of tinkering with baby monitors, why not run an FRS radio as the exciter feeding into a frequency doubler? The 2.5kHz narrow-band deviation will become the 5kHz standard as used in Ham F3 voice transmissions. Also, if you double the frequencies of FRS channels 1 through 7, your outputs will range from 925.125MHz to 925.425MHz. This falls nicely into the 902-928 spectrum which has a secondary allocation for Ham use. Channels 8 through 14 however would land you out of band, and as such, would be a violation of our licensing. However, 7 cheaply accessible frequencies would be nice, as well as help keep a presence of some sort on the band. As far as receivers go, the simplest would be to use a secondary receiver, but if you're feeling in need of a homebrew fix, an outboard frequency divider would keep you busy for a few weekends.

'73
Pat

2927. Re: Semiconductor Testers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 18:57:20 UTC
From: Poul Bundgaard <poul.bundgaard@mail.dk>
Message-ID: <3ea04a86$0$24730$edfadb0f@dread14.news.tele.dk>
Source record: 36030
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

> **If you mean the atlas tester, by Peak Instruments, then YES, YES,
> YES! It is an outstanding bargain for anyone dealing with a wide
> variety of semis, every day. It is fast and pretty much foolproof. It
> does have some difficulties with transistors which are diode
> protected, or those with internal resistors, but it reports that this
> is the case, so you can make allowances, accordingly.
>
> Highly recommended.

I'll second that. Outstanding product !

2928. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 19:09:15 UTC
From: averyfineman@aol.com
Message-ID: <20030418150915.18773.00000060@mb-m26.aol.com>
Source record: 36031

In article <d002435e.0304162251.4b4b5017@posting.google.com>,
eniac@eniac.homelinux.com (eniac) writes:

>I'm trying to rebuild an old FM transmitter with tubes, but i don't
>have all necessary air-variable capacitor that the circuit needs.
>So i think to build some myself from scratch because i found a little
>in shops but these capacitors are very expencive.
>I would like to build some AVC with 30pf and 50pf capacitance.
>I would like to ask you for advice, ideas, or sites URLS with similar
>projects.
>As i said i haven't all necessary capacitos, the capacitors that i
>have , are builded with porcelain.
>As these capacitors will be work with RF, is it necessary to build
>with porcelain ?
>Is it ok to use PVC or similar material instead of porcelain ?

For under-100 pFd variable capacitors of higher-power use, I
suggest an "plastic blade" type of variable. In such a form
the plates are fixed in position and a dielectric blade moving
in-out of the plates is the variable element.

The capacitance change ratio is much smaller with a
dielectric variable. Easy-to-work polystyrenes or even ABS
sheet material or G10 epoxy-glass substrate (without the
foil) has a dielectric constant of about 2.6. The actual
dielectric constant will be proportional to the blade material
thickness versus the total distance between plates (air has
a dielectric constant of 1). Dielectric blades do not have to
touch the plates. Spacing can be made adjustable and is
relatively easy to check using a micrometer. Capacitance
calculation formulas are accurate and found in many texts.

Use of plastic blades makes construction easier than
working with metal if there is no metalcrafting area in the
home workshop. Using a dielectric shaft with metal bearings
fore and aft, the dielectric blades can be epoxied to the shaft
at room temperature. Maximum to minimum capacitance
ratio will be somewhere between about 2:1 to 1.5:1 depending
on the blade dielectric constant and conducting plate
spacings. That form of construction avoids any noise from
conventional metal blade frame grounding contact on the
rotor shaft. It also has less stray inductance than a
conventional metal blade variable, important at VHF+.

I've had moderate success with that form about 30 years ago,
but seeking a specific variable-oscillator tuning that was

linear-frequency in rotation. Dielectric blades can be formed
by easier trimming than with metal blade variety.

Len Anderson
retired (from regular hours) electronic engineer person

2929. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 19:35:54 UTC
From: ^2@vc.net
Message-ID: <^2-1804031235540001@207.178.185.199>
Source record: 36032

In article <mYOdnfeg4vyirAKjXTWcqg@comcast.com>, "Ralph Lane"
<rlane7301@comcast.net> wrote:

> Suggest you use an opamp with three inputs through series resistors to neg
> input and resistor feedback.

** sound advice

>All four resistors could be variable. 3
> individual gains and one master gain.
> "Vic" <nospam@bogusaddress.com> wrote in message
> news:JPFna.43657$Y57.28267@fe05.atl2.webusenet.com...
> > I would like to connect three radios to ONE amplified speaker. So far as I
> know it would not be good to simply connect all three
> > radios audio in parallel, so how can it be done? A mixer ... too
> expensive.
> >
> > Can I take a project box and three isolation transformers to do the trick?
> Browsing through an electronics catalog I saw a
> > 'telephone' transformer which is 600 ohms primary and 600 ohms secondary.
> It is small and inexpensive. Could three of these be used
> > to 'mix' all three radio's to one speaker?
> >
> > Am I on the right track with this or is there another (inexpensive) way?
> >
> > Thanks,
> > Vic
> >
> >
> >

--
Rich, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

2930. Brewpub Web Site

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 19:46:13 UTC
From: Bart Fellin <BJFellin@earthlink.net>
Message-ID: <9CYna.29327$ey1.2643768@newsread1.prod.itd.earthlink.net>
Source record: 36033
Cross-posted to: rec.food.restaurants,rec.radio.amateur.homebrew,rec.travel.misc

Are you looking for a place the perfectly blends both malted barley and hops in such a way that it's aroma complements it's sweetness and bitterness. And when the spicy, fruity esters of yeast are added an alcoholic beverage is produced. A brew whose bouquet enchants your mind and a taste that tingles the tongue. And serves food Too?

Brewpubs for Travelers is a web site that recommends brewpubs based on personal experience. I have been to over 400 brewpubs in over 37 states. Let me recommend a brewpub for you next vacation, business meeting, or a night out.

http://www.brewpubsfortravelers.com/

2931. Drake TR-4 Noise Blanker Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 21:07:37 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <2VZna.8071$h%2.704698@read1.cgocable.net>
Source record: 36034
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have a Drake TR-4 Xcvr. It has a Noise Blanker switch on the front, but there are no wires going from switch to anything...obviously the NB was removed.
There are 2 NB listed for the TR-4. A [34-PNB] & A
[9-NB]
The 34-PNB looks like it has a plug assy that would plug into a socket on the TR-4, but my unit has no such socket.
Does that mean my unit should have the 9-NB unit?
Does anyone know how to tell which NB should go with which model of TR-4?
Does anyone have one of these units for Sale, or a suitable equivalent?
Thank You for any assistance
Norm VE3CZI

2932. Re: Brewpub Web Site

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 21:52:06 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.190a135f49bc4056989874@192.168.42.131>
Source record: 36035

In article <9CYna.29327$ey1.2643768@newsread1.prod.itd.earthlink.net>,
BJFellin@earthlink.net says...

> Are you looking for a place the perfectly blends both malted barley and
> hops in such a way that it's aroma complements it's sweetness and bitterness.
> And when the spicy, fruity esters of yeast are added an alcoholic beverage is
> produced. A brew whose bouquet enchants your mind and a taste that tingles the
> tongue. And serves food Too?

<snip remainder of off-topic ad>

Right idea, wrong newsgroup. 'Homebrew,' in the context of amateur
radio (and if you had bothered to read the newsgroup header lines, you
would have seen that it says rec.RADIO.AMATEUR.homebrew), has NOTHING
WHATSOEVER to do with the brewing of any sort of drinks, nor does it have
anything to do with food or restaurants.

Within the context of ham radio, 'homebrew' refers to the design
and construction of one's own electronic equipment to serve a specific
purpose in the radio communications arena.

No one "owns" Usenet newsgroups, but I would like to ask, as a
long-time reader of them, that you please pay more attention to where you
post your advertising. Based on what I saw in the 'Newsgroups' header
line, you were right on target with 2 out of 3.

Thanks much.

--
Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

2933. Re: Drake TR-4 Noise Blanker Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 22:18:08 UTC
From: Dave Edwards <kd2e@comcast.net>
Message-ID: <K4acnbu2Br0W5D2jXTWcpA@comcast.com>
Source record: 36036
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Someone up on Drake guts will answer for sure, but I think the 34PNB was for the receiver (R4C). Perhaps the noise blander for your TR4 was an option...like it was in 2C and R4c etc.
....Dave
"Norm VE3CZI" <ve3czi@arrl.net> wrote in message news:2VZna.8071$h%2.704698@read1.cgocable.net...
> I have a Drake TR-4 Xcvr. It has a Noise Blanker switch on the front, but
> there are no wires going from switch to anything...obviously the NB was
> removed.
> There are 2 NB listed for the TR-4. A [34-PNB] & A
> [9-NB]
> The 34-PNB looks like it has a plug assy that would plug into a socket on
> the TR-4, but my unit has no such socket.
> Does that mean my unit should have the 9-NB unit?
> Does anyone know how to tell which NB should go with which model of TR-4?
> Does anyone have one of these units for Sale, or a suitable equivalent?
> Thank You for any assistance
> Norm VE3CZI
>
>
>
>

2934. Wanted Info on IC-H6 modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-18 23:53:04 UTC
From: Lyanne & John Beverin <beverin@optushome.com.au>
Message-ID: <3ea08fdb$0$623$afc38c87@news.optusnet.com.au>
Source record: 36037

I am after a schematic &/or details on modifying an Icom IC-H6 to the 2 metre amateur band

John VK3CMO

2935. Any luck with Chinese 572B?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 00:01:26 UTC
From: enigma_y_2000@yahoo.com
Message-ID: <3ea091b9.19239705@news.usfamily.net>
Source record: 36038

Hi,

What luck have you had with Chinese 572B tubes?

Any with Penta Labs?

Generic no-name Chinese 572B?

Other Chinese 572B?

Inquiring tube purchaser needs to know. My Clip L needs 4 tubes!

Please reply via email.

Thanks,.

Bob

2936. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 00:08:59 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Rj0oa.44891$c42.18405@fe01.atl2.webusenet.com>
Source record: 36039
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

"* Je Forget !!!" <nospam@nospam.org> wrote in message
news:BAC59D6C.E923%nospam@nospam.org...
the simplest would be to use a secondary receiver, but if you're feeling in
> need of a homebrew fix, an outboard frequency divider would keep you busy
> for a few weekends.

Uh, wouldn't he then need a high gain 900 MHz amplifier to get the received signal up to where it could drive the divider? And what about the horrendous intermod that would generate? The last time I checked dividers were not very linear.

My vote would be for a an oscillator/mixer combination.

Jim
N8EE

2937. Re: Drake TR-4 Noise Blanker Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 00:57:18 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87r87z9udt.fld@barrow.com>
Source record: 36040
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Dave Edwards" <kd2e@comcast.net> wrote:
>Someone up on Drake guts will answer for sure, but I think the 34PNB was for
>the receiver (R4C). Perhaps the noise blander for your TR4 was an
>option...like it was in 2C and R4c etc.
>....Dave

The 2-NB noise blanker is for the 2C receivers.

The 34PNB noise blanker is for the TR3 and TR4 transceivers.

The 4-NB noise blanker is for the R4C series receivers.

The 7-NB noise blanker is for the TR7 transceiver.

The 9-NB noise blanker is for the TR6 transceiver.

>"Norm VE3CZI" <ve3czi@arrl.net> wrote in message
>news:2VZna.8071$h%2.704698@read1.cgocable.net...
>> I have a Drake TR-4 Xcvr. It has a Noise Blanker switch on the front, but
>> there are no wires going from switch to anything...obviously the NB was
>> removed.
>> There are 2 NB listed for the TR-4. A [34-PNB] & A
>> [9-NB]
>> The 34-PNB looks like it has a plug assy that would plug into a socket on
>> the TR-4, but my unit has no such socket.
>> Does that mean my unit should have the 9-NB unit?
>> Does anyone know how to tell which NB should go with which model of TR-4?
>> Does anyone have one of these units for Sale, or a suitable equivalent?
>> Thank You for any assistance
>> Norm VE3CZI
>>
>>
>>
>>
>
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

2938. Re: 900 mhz Baby monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 01:56:38 UTC
From: * Je Forget !!! <nospam@nospam.org>
Message-ID: <BAC62516.E96A%nospam@nospam.org>
Source record: 36041
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,alt.ham-radio.uwave

Sure, but I reiterate, a separate receiver would be the simplest. Secondly, the problem with using an LO to bring the rx frequency down is it would necessitate further processing to reduce the deviation of the rx'd signal. I do however, see your point on the intermod issue, so it's decided; we'll use outboard receivers... :)

'73
Pat, VE3PMK

in article Rj0oa.44891$c42.18405@fe01.atl2.webusenet.com, JLB at IHateSpam@nospam.net wrote on 4/18/03 8:08 PM:

>> the simplest would be to use a secondary receiver, but if you're feeling in
>> need of a homebrew fix, an outboard frequency divider would keep you busy
>> for a few weekends.
>
>
> Uh, wouldn't he then need a high gain 900 MHz amplifier to get the received
> signal up to where it could drive the divider? And what about the
> horrendous intermod that would generate? The last time I checked dividers
> were not very linear.
>
> My vote would be for a an oscillator/mixer combination.
>
> Jim
> N8EE

2939. heathkit HN-31

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 02:50:00 UTC
From: Vince <vcl@sympatico.ca>
Message-ID: <pQ2oa.6930$uY.793278@news20.bellglobal.com>
Source record: 36042

hi guys, i have a heathkit HN-31 dummy load an i would like a manual for it and if anyone can let me know whats the maximum input power for the dummy load and how long can you keep the power in there on keydown can anyone help. plaese email me @ ve3elb@rac.ca thank you......

Vince ve3elb
==========
Email: ve3elb@rac.ca
Visit Our Webpages @ :
www.qsl.net/ve3elb
http://www3.sympatico.ca/vcl

2940. Re: Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 07:46:47 UTC
From: jo <rhaub@itctel.com>
Message-ID: <va1vn4e8ctarda@corp.supernews.com>
Source record: 36043

Yep, I've ordered a few times. I made a mistake in my order once and called back 5 hours later and they changed my order without a hitch. Friendly folks. It took 7-8 days to get my order but thats about what I get from other places as well.

Rick KC0GIX

"Tracy Fort" <beerbarrel@cox.net> wrote in message news:2vpt9v40kv406hn07q5qtudpqk5vunas5c@4ax.com...
> Anybody ever have a good experience with these folks?
> Tracy Fort
>
> KE4ODD
>
> beerbarrel@cox<NOSPAM>.net
>
> remove <NOSPAM> for repliess

2941. WTB: 950pF (no less) air-spaced variable capacitor 0.8mm gap (no less) UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 10:35:35 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b7r8lm$3iajc$1@ID-150848.news.dfncis.de>
Source record: 36044
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,uk.radio.amateur

950PF is about right, and I don't really need anything greater than a 0.08mm (0.031") gap.

(I know where to get one, but I'm hoping I can get a capacitor cheaper. :c))

Do you have one sitting around in your junkbox doin' nothin'.

MUST be double shafted, ie one at each end. 1/4" diameter.

I'm in Yorkshire.

Want quality, like a Jackson Bros item if poss.

My email:

news_email@REMOVEntlworld.com

Please remove "REMOVE".

Rich.

2942. Re: heathkit HN-31

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 15:15:11 UTC
From: fmmck@aol.com
Message-ID: <20030419111511.18914.00000215@mb-m16.aol.com>
Source record: 36045

<< i have a heathkit HN-31 dummy load an i would like a manual for it
and if anyone can let me know whats the maximum input power for the dummy
load and how long can you keep the power in there on keydown can anyone
help. >>

Vince-

Check out the "Boat Anchor Manual Archives",
<ftp://bama.sbc.edu/downloads/heath/hn31/>, for scanned pages of the manual.

The manual has a graph showing how long you can use it for different power
levels up to 1000 watts maximum. It looks like 200 watts continuous. Maximum
depends on what kind of oil you use. Mineral oil is good for about a minute,
and transformer oil is good for about nine minutes at 1000 watts.

73, Fred, K4DII

2943. Mystery Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-19 16:44:25 UTC
From: Al <afjjay@earthlink.net>
Message-ID: <afjjay-212F2C.12442719042003@news.bellatlantic.net>
Source record: 36046

I recently picked up this very well made homemade device. It contains one vacuum tube which lights up when the cord is plugged in. It requires and oscillator input and either a coil or a capacitor input. It may tune for resonance to identify RF components.

Go to the newsgroup: alt.binaries.schematics.electronic
for a view.

Any idea of what it is? And if someone wants it, they are welcome to it for the price of shipping.

Al

--

Remove extra j from the address to reply.

2944. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 00:20:11 UTC
From: Vic <nospam@bogusaddress.com>
Message-ID: <kHloa.21567$kp4.3543@fe08.atl2.webusenet.com>
Source record: 35947

"Ralph Lane" <rlane7301@comcast.net> wrote in message:

> Suggest you use an opamp with three inputs through series resistors to neg
> input and resistor feedback. All four resistors could be variable. 3
> individual gains and one master gain.

Hello Ralph,

Seems your idea is the general consensus of the group. I only have an idea of what your suggestion is however. I can build circuits
with a schematic but my technical knowledge is limited so are there schematics available online you (or someone) could direct me to?

One poster (Max) gave a few web sites to check out. Are the schematics found there the type you describe?

Thanks for your help,
Vic

"Ralph Lane" <rlane7301@comcast.net> wrote in message
news:mYOdnfeg4vyirAKjXTWcqg@comcast.com...
> Suggest you use an opamp with three inputs through series resistors to neg
> input and resistor feedback. All four resistors could be variable. 3
> individual gains and one master gain.
> "Vic" <nospam@bogusaddress.com> wrote in message
> news:JPFna.43657$Y57.28267@fe05.atl2.webusenet.com...
> > I would like to connect three radios to ONE amplified speaker. So far as I
> know it would not be good to simply connect all three
> > radios audio in parallel, so how can it be done? A mixer ... too
> expensive.
> >
> > Can I take a project box and three isolation transformers to do the trick?
> Browsing through an electronics catalog I saw a
> > 'telephone' transformer which is 600 ohms primary and 600 ohms secondary.
> It is small and inexpensive. Could three of these be used
> > to 'mix' all three radio's to one speaker?
> >
> > Am I on the right track with this or is there another (inexpensive) way?
> >
> > Thanks,
> > Vic
> >
> >
> >
>
>

2945. small PLL transmitter ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 04:16:46 UTC
From: Steve <Staticx9@optonline.net>
Message-ID: <Oapoa.49524$MB4.20406363@news4.srv.hcvlny.cv.net>
Source record: 35948

i want to build a small WFM transmitter to be used to hook up to a scanner or other audio device. it will transmit to my mp3 player which has a 76-109mhz receiver built in. reason being, i can record direct from radio into a *.wav file. 256MB can hold 18hrs of sound at 33khz.

i have built little kits and FM transmitters before, but most drift to much. i want to set it on one discrete frequency and thats it. most commercial units can only transmit 88-108 and are too large in size

-PLL locked or very very frequency stable
-76-88Mhz operation
-low power 10-20mW (20-40 feet at most)
-small size (to fit in radioshack project box cat#270-288)
box is 9/16x1-3/8x2-1/8 or maybe stack two on top
of each other
-able to run on single 3V cell (flat lithium)
-line level input
-can be mono, stereo is nto really needed

it seems like a lot, i just want some ideas, or if anyone has built something similiar if you have any tips please email me or post to let other know

thanks in advance

steve

2946. FA FA FA BIG GALLON JUG AMP DEL TO DAYTON

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 04:28:37 UTC
From: eimacman@aol.com
Message-ID: <20030420002837.18889.00000267@mb-m07.aol.com>
Source record: 35949

3-1000Z AMP NO RES DEL TO DAYTON

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3019361403

2947. Homebrew double sideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 06:36:29 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0304192236.5f9c82fc@posting.google.com>
Source record: 35950

With sunspot numbers declining I reluctantly decided to shift my portable one watt DSB HB transceiver from 17 meters to 20 meters. This rig is a very simple DC RX with a corresponding transmitter side. VXO is the only common stage. On TX, the VXO feeds an NE602 balanced modulator. I used an LM386 as the mic amp (that's what I had available). For the microphone I use an old SONY walkman mic.

On RX, I have a bandpass filter followed by an NE602 functioning as an RF amp. Balanced output to another NE602, this one the product detector. Then ANOTHER NE602 as an AF amp (again, balanced input) followed by an LM386. I get the NE602s to work as amps by putting five volts on pin 6. Nicest DC RX I've ever used. No common mode hum, even with AC supply.

Shifting from 17 to 20 was easy. Some 50 pf caps across the few tuned circuits brought them into the band. I got two new crystals from JAN (very nice folks) and rigged up a panel switch to go from one to the other. With the two rocks I can tune 14.185 --14.211.

I had some trouble with the carrier surpression, but I found that I could improve it by reducing the VXO energy going into the 602. Instead of the recommended 200 millivolts, I went to around 20 by using a "gimmick" cap (just two wires twisted together) between pin 6 and the VXO. By varying the amount of twist I could reduce the carrier to minimal levels. This gimmick was fun.

The rig is working very well. I'm getting 1-2 watts PEP out. In two days I've worked Spain, Italy, and the U.K. This morning I had a nice ragchew with K3LP in Maryland. It is a real hoot to tell people that they can switch to LSB and still copy just fine.

I don't think QRPers should be scared away by the big guns on 20 phone. And I think the simplicity of DSB makes it an ideal choice for homebrewers of intermediate skill level who want to break into the world of phone.

If you hear me, please give me a shout. USB or LSB!

73 from the Azores
Bill CU2JL N2CQR
http://planeta.clix.pt/n2cqr

2948. Re: Pin out for PT31963 power transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 09:28:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3ea1d909.42754915@news.online.no>
Source record: 35951
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Wed, 16 Apr 2003 18:36:28 -0500, "JBJohnson" <jbjsabu@yahooNOT.com>
wrote:

>
>"Neil" <nobody@nospam.net> wrote in message
>news:b7ja49$p7n$1$8300dec7@news.demon.co.uk...
>> Hi there,
>>
>> I'm trying desperately to find out the pin-out for a PT31963 RF power
>> transistor. Can anyone help? I know which wires are the emitter & I'm
>> presuming the small wire is the base, but not 100% sure!
>>
>> --
>>
>>
>> Neil
>> (Manchester, UK)
>>
>This is supposed to be a replacement (same?):
> http://www.semiconductors.philips.com/acrobat/datasheets/BLY89C_CNV_2.pdf
>
>
>
You can't do much in the shack without a VOM, so when you already know
which is emitter it is very easy to find base and collector

73
LA8AK
--
remove ,xnd to reply

2949. Ameritron/MFJ Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 12:08:48 UTC
From: ^2@vc.net
Message-ID: <^2-2004030508480001@207.178.185.199>
Source record: 35952

As I understand it, Ameritron/MFJ replaced their amplifier engineer. If this true, who is the new one?
thanks

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

2950. Re: Homebrew double sideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 12:15:03 UTC
From: ^2@vc.net
Message-ID: <^2-2004030515030001@207.178.185.199>
Source record: 35953

In article <97f305da.0304192236.5f9c82fc@posting.google.com>,
n2cqr@clix.pt (Bill Meara) wrote:

> With sunspot numbers declining I reluctantly decided to shift my
> portable one watt DSB HB transceiver from 17 meters to 20 meters.
> This rig is a very simple DC RX with a corresponding transmitter side.
> VXO is the only common stage. On TX, the VXO feeds an NE602 balanced
> modulator. I used an LM386 as the mic amp (that's what I had
> available). For the microphone I use an old SONY walkman mic.
>
> On RX, I have a bandpass filter followed by an NE602 functioning as an
> RF amp. Balanced output to another NE602, this one the product
> detector. Then ANOTHER NE602 as an AF amp (again, balanced input)
> followed by an LM386. I get the NE602s to work as amps by putting
> five volts on pin 6. Nicest DC RX I've ever used. No common mode
> hum, even with AC supply.
>
> Shifting from 17 to 20 was easy. Some 50 pf caps across the few tuned
> circuits brought them into the band. I got two new crystals from JAN
> (very nice folks) and rigged up a panel switch to go from one to the
> other. With the two rocks I can tune 14.185 --14.211.
>
> I had some trouble with the carrier surpression, but I found that I
> could improve it by reducing the VXO energy going into the 602.
> Instead of the recommended 200 millivolts, I went to around 20 by
> using a "gimmick" cap (just two wires twisted together) between pin 6
> and the VXO. By varying the amount of twist I could reduce the
> carrier to minimal levels. This gimmick was fun.
>
> The rig is working very well. I'm getting 1-2 watts PEP out. In two
> days I've worked Spain, Italy, and the U.K. This morning I had a nice
> ragchew with K3LP in Maryland. It is a real hoot to tell people that
> they can switch to LSB and still copy just fine.
>
> I don't think QRPers should be scared away by the big guns on 20
> phone. ...

Running 1 watt per sideband on 20m invites comparison to skateboarding
on the Ventura Freeway in North Hollywood during rush hour.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

2951. Re: Ameritron/MFJ Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 15:06:54 UTC
From: Peter Brackett <ab4bc@ix.netcom.com>
Message-ID: <b7ud2d$5qp$1@slb9.atl.mindspring.net>
Source record: 35954

Rich:

Why not just ask Martin Jue?

--
Peter K1PO
Indialantic By-the-Sea, FL.

"?R.L. Measures" <^2@vc.net> wrote in message
news:^2-200403050848000l@207.178.185.199...
> As I understand it, Ameritron/MFJ replaced their amplifier engineer. If
> this true, who is the new one?
> thanks
>
> --
> Rich, AG6K, 805 386 3734, www.vcnet.com/measures
> remove ^ from e-mail address

2952. Re: Ameritron/MFJ Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 16:06:14 UTC
From: ^2@vc.net
Message-ID: <^2-2004030906140001@207.178.185.199>
Source record: 35955

In article <b7ud2d$5qp$1@slb9.atl.mindspring.net>, "Peter Brackett"
<ab4bc@ix.netcom.com> wrote:

> Rich:
>
> Why not just ask Martin Jue?
>
I don't know him.

> Peter K1PO
> Indialantic By-the-Sea, FL.
>
> "?R.L. Measures" <^2@vc.net> wrote in message
> news:^2-2004030508480001@207.178.185.199...
> > As I understand it, Ameritron/MFJ replaced their amplifier engineer. If
> > this true, who is the new one?
> > thanks
> >
> > --
> > Rich, AG6K, 805 386 3734, www.vcnet.com/measures
> > remove ^ from e-mail address

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

2953. (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 21:36:46 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <4hEoa.55950$c42.55332@fe01.atl2.webusenet.com>
Source record: 35956

I have a need for a battery charger that will charge 4 or more 9 volt transistor type NiMH batteries.

All of the commercial units I have seen will charge multiple D, C, AA, or AAA batteries, but only one or two 9V, but I need to charge at least 4 at a time.

Is there such a thing, or will I have to homebrew it? Can NiMH batteries be trickle charged and then left on trickle indefinitely, like NiCads? More specifically, can they be charged with a trickle and then left in the charger until needed? This would greatly simplify the homebrewing if that is what I have to do.

Jim
N8EE

2954. Re: small PLL transmitter ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-20 22:43:35 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <roFoa.508$Bk5.510997@newssvr28.news.prodigy.com>
Source record: 35957

You might want to check out NorthCountryRadio. They sell kits
that do what you're talking about.

http://www.northcountryradio.com/Kitpages/mpx96.htm

Regards,
Bruce

"Steve" <Staticx9@optonline.net> wrote in message
news:Oapoa.49524$MB4.20406363@news4.srv.hcvlny.cv.net...
> i want to build a small WFM transmitter to be used to hook up to a scanner
> or other audio device. it will transmit to my mp3 player which has a
> 76-109mhz receiver built in. reason being, i can record direct from radio
> into a *.wav file. 256MB can hold 18hrs of sound at 33khz.
>
>
> i have built little kits and FM transmitters before, but most drift to
much.
> i want to set it on one discrete frequency and thats it. most commercial
> units can only transmit 88-108 and are too large in size
>
> -PLL locked or very very frequency stable
> -76-88Mhz operation
> -low power 10-20mW (20-40 feet at most)
> -small size (to fit in radioshack project box cat#270-288)
> box is 9/16x1-3/8x2-1/8 or maybe stack two on top
> of each other
> -able to run on single 3V cell (flat lithium)
> -line level input
> -can be mono, stereo is nto really needed
>
> it seems like a lot, i just want some ideas, or if anyone has built
> something similiar if you have any tips please email me or post to let
other
> know
>
> thanks in advance
>
> steve
>
>

2955. Re: Homebrew double sideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 01:56:59 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <lvucnfazEMBA0j6jXTWcrg@comcast.com>
Source record: 35958

Have you considered writing an article about your rig? This magazine may be interested:
http://www.njqrp.org/data/qrp_homebrewer.html

What you've posted here could easily be adapted into an effective query letter to the editor.

Tom, N3IJ

"Bill Meara" <n2cqr@clix.pt> wrote in message news:97f305da.0304192236.5f9c82fc@posting.google.com...
> With sunspot numbers declining I reluctantly decided to shift my
> portable one watt DSB HB transceiver from 17 meters to 20 meters.
> This rig is a very simple DC RX with a corresponding transmitter side.
> VXO is the only common stage. On TX, the VXO feeds an NE602 balanced
> modulator. I used an LM386 as the mic amp (that's what I had
> available). For the microphone I use an old SONY walkman mic.
>
> On RX, I have a bandpass filter followed by an NE602 functioning as an
> RF amp. Balanced output to another NE602, this one the product
> detector. Then ANOTHER NE602 as an AF amp (again, balanced input)
> followed by an LM386. I get the NE602s to work as amps by putting
> five volts on pin 6. Nicest DC RX I've ever used. No common mode
> hum, even with AC supply.
>
> Shifting from 17 to 20 was easy. Some 50 pf caps across the few tuned
> circuits brought them into the band. I got two new crystals from JAN
> (very nice folks) and rigged up a panel switch to go from one to the
> other. With the two rocks I can tune 14.185 --14.211.
>
> I had some trouble with the carrier surpression, but I found that I
> could improve it by reducing the VXO energy going into the 602.
> Instead of the recommended 200 millivolts, I went to around 20 by
> using a "gimmick" cap (just two wires twisted together) between pin 6
> and the VXO. By varying the amount of twist I could reduce the
> carrier to minimal levels. This gimmick was fun.
>
> The rig is working very well. I'm getting 1-2 watts PEP out. In two
> days I've worked Spain, Italy, and the U.K. This morning I had a nice
> ragchew with K3LP in Maryland. It is a real hoot to tell people that
> they can switch to LSB and still copy just fine.
>
> I don't think QRPers should be scared away by the big guns on 20
> phone. And I think the simplicity of DSB makes it an ideal choice for
> homebrewers of intermediate skill level who want to break into the

> world of phone.
>
> If you hear me, please give me a shout. USB or LSB!
>
> 73 from the Azores
> Bill CU2JL N2CQR
> http://planeta.clix.pt/n2cqr

2956. Re: (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 02:52:06 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3ea35a6d.2063383@news.cantech.net.au>
Source record: 35959

On Sun, 20 Apr 2003 17:36:46 -0400, "JLB" <IHateSpam@nospam.net>
wrote:

>I have a need for a battery charger that will charge 4 or more 9 volt
>transistor type NiMH batteries.
>
>All of the commercial units I have seen will charge multiple D, C, AA, or
>AAA batteries, but only one or two 9V, but I need to charge at least 4 at a
>time.
>
>Is there such a thing, or will I have to homebrew it?

I suspect you will have to homebrew it, but that's no disaster.

>Can NiMH batteries be
>trickle charged and then left on trickle indefinitely, like NiCads?

Yes

>More
>specifically, can they be charged with a trickle and then left in the
>charger until needed? This would greatly simplify the homebrewing if that
>is what I have to do.

Yes. If you can afford the time required to charge them at constant
trickle current. The difficulty with sensible charging of
cells/batteries is that:
(a) some charge termination system is required to account for variable
state of charge (SoC) when recharging is commenced; or
(b) you trickle charge them at a rate which recombination and heat
dissipation allow to continue indefinitely.

(a) can be fickle to implement, and is part of the reason there are a
literal horde of charge controller chips out there. As indicated
above, if you can bear a rate of 0.03C or so, then a constant current
gang charger is a simple exercise, using an LM317LZ per socket.

Have a look at http://www.powerstream.com for info on trickle rates.

There is also a current thread in sci.chem.electrochem.battery headed
"9 volt" MI-MH charging procedure using bench supply...
which may shed some more light.

HTH

2957. FS: NOS Eimac 304TL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 07:03:13 UTC
From: ethan <read_message@to.reply>
Message-ID: <QIMoa.311934$Zo.62602@sccrnsc03>
Source record: 35960
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Reply to:
arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)

In original box. Pictures available. I can't test properly, but I'll
guaranty it not to be DOA. AES gets $278.00. I'd like $100 +
ship. from 98226.

Ethan

--

Reply to:
arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)

2958. PCB Software - Thanks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 09:30:46 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <lz412xAGp7o+EwW+@langwang.demon.co.uk>
Source record: 35973

Thanks to everyone who sent me suggestions for PCB drafting
software. I now have more pieces of software than I know what to do with
.... but I'm going to have fun trying them all out !!!
--
Dick
GM0MNL

2959. Re: (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 09:44:54 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <x7Poa.8$SK3.185@newsfep1-win.server.ntli.net>
Source record: 35961

"budgie" <budgie@nowhere.cantech.net.au> wrote in message
news:3ea35a6d.2063383@news.cantech.net.au...
> On Sun, 20 Apr 2003 17:36:46 -0400, "JLB" <IHateSpam@nospam.net>
> wrote:
>
> >I have a need for a battery charger that will charge 4 or more 9 volt
> >transistor type NiMH batteries.
> >
> >All of the commercial units I have seen will charge multiple D, C, AA, or
> >AAA batteries, but only one or two 9V, but I need to charge at least 4 at
a
> >time.
> >
> >Is there such a thing, or will I have to homebrew it?
>
> I suspect you will have to homebrew it, but that's no disaster.
>
> >Can NiMH batteries be
> >trickle charged and then left on trickle indefinitely, like NiCads?
>
> Yes
>
> >More
> >specifically, can they be charged with a trickle and then left in the
> >charger until needed? This would greatly simplify the homebrewing if
that
> >is what I have to do.
>
> Yes. If you can afford the time required to charge them at constant
> trickle current. The difficulty with sensible charging of
> cells/batteries is that:
> (a) some charge termination system is required to account for variable
> state of charge (SoC) when recharging is commenced; or
> (b) you trickle charge them at a rate which recombination and heat
> dissipation allow to continue indefinitely.
>
> (a) can be fickle to implement, and is part of the reason there are a
> literal horde of charge controller chips out there. As indicated
> above, if you can bear a rate of 0.03C or so, then a constant current
> gang charger is a simple exercise, using an LM317LZ per socket.
>
> Have a look at http://www.powerstream.com for info on trickle rates.
>
> There is also a current thread in sci.chem.electrochem.battery headed

> "9 volt" MI-MH charging procedure using bench supply...
> which may shed some more light.
==========
Could your NiMH 9V batteries in fact be 9.6 V ?.
I have a few ; they apparently have 8 pcs 1.2 v cell in series, their capacity is 160mAh
Charging instructions : 14-16 hrs @ 16 mA or 6hrs @ 32 mA.
Continuous trickle charging 4 mA seems OK
However before charging it is important to discharge to 1 Volt per cell ; in my case to 8 Volts.

In your case I would suggest you homebrew a combined discharger /trickle charger , to keep it simple.

Frank gm0csz.kn6wh@ntlworld.com

2960. Re: (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 11:26:30 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3ea3d4c3.3648867@news.cantech.net.au>
Source record: 35962

On Mon, 21 Apr 2003 10:44:54 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>"budgie" <budgie@nowhere.cantech.net.au> wrote in message
>news:3ea35a6d.2063383@news.cantech.net.au...
>> On Sun, 20 Apr 2003 17:36:46 -0400, "JLB" <IHateSpam@nospam.net>
>> wrote:
>>
>> >I have a need for a battery charger that will charge 4 or more 9 volt
>> >transistor type NiMH batteries.
>> >
>> >All of the commercial units I have seen will charge multiple D, C, AA, or
>> >AAA batteries, but only one or two 9V, but I need to charge at least 4 at
>a
>> >time.
>> >
>> >Is there such a thing, or will I have to homebrew it?
>>
>> I suspect you will have to homebrew it, but that's no disaster.
>>
>> >Can NiMH batteries be
>> >trickle charged and then left on trickle indefinitely, like NiCads?
>>
>> Yes
>>
>> >More
>> >specifically, can they be charged with a trickle and then left in the
>> >charger until needed? This would greatly simplify the homebrewing if
>that
>> >is what I have to do.
>>
>> Yes. If you can afford the time required to charge them at constant
>> trickle current. The difficulty with sensible charging of
>> cells/batteries is that:
>> (a) some charge termination system is required to account for variable
>> state of charge (SoC) when recharging is commenced; or
>> (b) you trickle charge them at a rate which recombination and heat
>> dissipation allow to continue indefinitely.
>>
>> (a) can be fickle to implement, and is part of the reason there are a
>> literal horde of charge controller chips out there. As indicated
>> above, if you can bear a rate of 0.03C or so, then a constant current
>> gang charger is a simple exercise, using an LM317LZ per socket.

>>
>> Have a look at http://www.powerstream.com for info on trickle rates.
>>
>> There is also a current thread in sci.chem.electrochem.battery headed
>> "9 volt" MI-MH charging procedure using bench supply...
>> which may shed some more light.
>==
>Could your NiMH 9V batteries in fact be 9.6 V ?.

Moderately academic in the context of CC charging.

> I have a few ; they apparently have 8 pcs 1.2 v cell in series, their
>capacity is 160mAh
>Charging instructions : 14-16 hrs @ 16 mA or 6hrs @ 32 mA.
>Continuous trickle charging 4 mA seems OK
>However before charging it is important to discharge to 1 Volt per cell ;
>in my case to 8 Volts.

Why?

There is little if any benefit to accrue from discharge-before-charge
on NiMH cells. OTOH, it may well contribute to a shorter life.

>In your case I would suggest you homebrew a combined discharger /trickle
>charger , to keep it simple.

That would actually complicate it.

2961. Buy, sell, Heathkits

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 11:52:56 UTC
From: Gary Wood <docky@earthlink.net>
Message-ID: <sYQoa.35449$4P1.3162126@newsread2.prod.itd.earthlink.net>
Source record: 35963

FREE FREE Heathkit list
Keep in touch with the other Heathkit "nuts" you can list to buy, sell, or trade infromation ... send e-mail to majordomo@heathkits.com in the body type .. subscribe heathkits ..
You can have an e-mail address of (your call)@heathkits.com for only $.25 a month (that's how we support ourselves) ASK ME!

2962. Re: (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 21:01:12 UTC
From: "J. Yazel" <jyazel@nls.net>
Message-ID: <ovm8avo3eqnhuir1l6vqg8cqp4shmmnvn7@4ax.com>
Source record: 35964

On Sun, 20 Apr 2003 17:36:46 -0400, "JLB" <IHateSpam@nospam.net>
wrote:

>I have a need for a battery charger that will charge 4 or more 9 volt
>transistor type NiMH batteries.
>
>All of the commercial units I have seen will charge multiple D, C, AA, or
>AAA batteries, but only one or two 9V, but I need to charge at least 4 at a
>time.
======================

Use two of the 2-battery chargers.

Jack

2963. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-21 21:53:09 UTC
From: Lasse SM5GLC <no_email@today.sri>
Message-ID: <krp8avouei1okqfirn54tf2otfod7kefrt@4ax.com>
Source record: 35965

Jan,
I would try to clock the chip directly, i.e. using the 50 MHz clock
and not use the PLL.

I'll see if I get some spare time to try a demo board from AD using
9850(?) and check the jitter. If so I will post the result for you to
compare.

Please let us know the outcome!

/Lasse SM5GLC
On Wed, 16 Apr 2003 22:35:21 +0300, "Jan Wagner" <jwagner@cc.hut.fi>
wrote:

2964. Re: small PLL transmitter ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 01:10:39 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1050973837.925349@auth2.dns.griffin.net.uk>
Source record: 35966

using a philips tsa5511 or saa1057 running on 5v with a pic and 1 fet 1
varicap should do the trick..total cost less than $20...try freddospage.nl

g0zen simon
"Bruce Raymond" <raymondb@dma.org> wrote in message
news:roFoa.508$Bk5.510997@newssvr28.news.prodigy.com...
> You might want to check out NorthCountryRadio. They sell kits
> that do what you're talking about.
>
> http://www.northcountryradio.com/Kitpages/mpx96.htm
>
> Regards,
> Bruce
>
>
> "Steve" <Staticx9@optonline.net> wrote in message
> news:Oapoa.49524$MB4.20406363@news4.srv.hcvlny.cv.net...
> > i want to build a small WFM transmitter to be used to hook up to a
scanner
> > or other audio device. it will transmit to my mp3 player which has a
> > 76-109mhz receiver built in. reason being, i can record direct from
radio
> > into a *.wav file. 256MB can hold 18hrs of sound at 33khz.
> >
> >
> > i have built little kits and FM transmitters before, but most drift to
> much.
> > i want to set it on one discrete frequency and thats it. most commercial
> > units can only transmit 88-108 and are too large in size
> >
> > -PLL locked or very very frequency stable
> > -76-88Mhz operation
> > -low power 10-20mW (20-40 feet at most)
> > -small size (to fit in radioshack project box cat#270-288)
> > box is 9/16x1-3/8x2-1/8 or maybe stack two on top
> > of each other
> > -able to run on single 3V cell (flat lithium)
> > -line level input
> > -can be mono, stereo is nto really needed
> >
> > it seems like a lot, i just want some ideas, or if anyone has built
> > something similiar if you have any tips please email me or post to let
> other
> > know

> >
> > thanks in advance
> >
> > steve
> >
> >
>
>

2965. Re: (A little bit OT) Homebrew 9v battery gang charger?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 01:15:54 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <4B0pa.57895$c42.28220@fe01.atl2.webusenet.com>
Source record: 35967

"J. Yazel" <jyazel@nls.net> wrote in message
news:ovm8avo3eqnhuir1l6vqg8cqp4shmmnvn7@4ax.com...

> Use two of the 2-battery chargers.
>

Or four of the single battery chargers??

That would cost two (or four) times as much. I could probably build one for less, and if I did so I would make it to charge six or eight at a time. Remember 4 was given as the minimum.

Jim
N8EE

2966. bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 01:16:41 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1050974199.440201@auth2.dns.griffin.net.uk>
Source record: 35968
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

looking to buy 500w 60-125mhz element...anyone got a spare 1 for sale??

simon g0zen

2967. Newsletter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 01:42:29 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <dY0pa.506$764.25306@news.iquest.net>
Source record: 35969

The latest issue of the Flying Pigs QRP Club International newsletter is now online for viewing, as usual, it's free. The Flying Pigs QRP Club International is a virtual QRP club with no dues, no meetings, and no rules. Join us and have fun with homebrewing and QRP ops. Check us out at:

http://www.fpqrp.com

Read the Bacon Bits Newsletter, be entertained!

--
==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

2968. FS: Parts - Surplus and Otherwise

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 02:30:23 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <7F1pa.508$764.25298@news.iquest.net>
Source record: 35970
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Junkbox Surplus Parts for Sale as of 04/20/2003
==========

NEW ITEMS

I have 200 excess pcs of 5.000 Mhz crystals. These are the miniture crystals like you see in the latest QRP Quarterly. Tiny round crystals with two wire leads, I think I've seen these in watches. If we ever get 60m these could be a lot of fun.
50 for $4.00 shipped to the USA.

I have 400 pcs of 102J (1000pf) Shinyei ceramic caps rated at 630 VDC. These are in bags of 200.
$5.50 for 200 including USA shipping.

I have surplus 50K 1 Turn linear taper pots, about 25 each. These are chassis mount pots with the nut. About the size of a nickle, and about 1/2 inch deep with a 1/4 inch shaft about 1/2 inch long.
5 for $5.00 including USA shipping.

2.5/5.5mm Coaxial Power Jacks for PCB insertion or Manhattan install
10 for $3.00

285pf Green Square Plastic Cap, PC Board Insertion 10%
100 for $4.00

220pf 5% 63V SMD Caps - Surface Mount size is 0806
50 for $1.00 PLUS you must send a SASE for return.

Odd Items
==========
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
==========
All caps now 50/$3 or 100/$5
==========
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v

3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==========
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7 100/$30
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$8.00
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4

Op AMPS
==========
LM386N-1 - Audio Amps 5 for $3.00

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $3.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

2969. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 03:03:01 UTC
From: dialcover@webtv.net
Message-ID: <15698-3EA4B0E5-106@storefull-2315.public.lawson.webtv.net>
Source record: 35971

Adel nibbling tool works well. Bill

2970. NOS Eimac 304TL reduced

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 06:24:12 UTC
From: ethan <read_message@to.reply>
Message-ID: <ge5pa.37816$gK.146889@rwcrnsc52.ops.asp.att.net>
Source record: 35972
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Reduced to $75.

Reply to:
arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)

ethan <read_message@to.reply> wrote in message news:...
> Reply to:
> arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)
>
> In original box. Pictures available. I can't test properly, but I'll
> guaranty it not to be DOA. AES gets $278.00. I'd like $100 +
> ship. from 98226.
>
> Ethan
>
> --
>
> Reply to:
> arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)
>
>

2971. Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 09:26:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b831of$5tl23$1@ID-150848.news.dfncis.de>
Source record: 35974
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi. I'm in the UK and need some plexiglass or similar material. Needs to be pretty thick, about 1/4" or just under. It's for a roller coaster. Original material looks like bakelite or maybe thick paxolene, probably paxoline.

Anyone here buy this kind of stuff, and if so, can you recomend a supplier?

TIA. Rich.

2972. How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 10:35:44 UTC
From: Stephane Rey <stephane.rey@netcourrier.com>
Message-ID: <1103_1051007744@news.wanadoo.fr>
Source record: 35975

In order to design a SWR/Watt-meter, I would like to design
a directive coupler where the direct and indirect voltages will
be available. I wouldn't like to use PCB option because I
would measure about 50W.
I've ever seen some description, but I would like to find
information on how to compute and design this coupler.
The frequencies on which I would like to work are 2m and
70cm.

Thanks
Regards

Stephane REY
F1TJJ

2973. which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 10:59:31 UTC
From: Stephane Rey <stephane.rey@netcourrier.com>
Message-ID: <1103_1051009171@news.wanadoo.fr>
Source record: 35976

Hello,

I'm designing a transceiver and I would add for the
frequency adjsutment a coder like the ones we can found
on the HF transceivers..

I've ever seen some coder but with holes and I would like
something as I've on my TS440 from Kenwood.

I've guessed to build an optical one with a disc and holes
and infrared sensor, but it's not a modern way and it's too
big.
I'm looking for a no expensive solution.

If you have some parts and suppliers to recommend to me it
will be the welcome.

Thanks
Stephane REY
F1TJJ

2974. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 11:44:52 UTC
From: Steve <no-one@home.here>
Message-ID: <WY9pa.1485$lr4.469@newsfep1-gui.server.ntli.net>
Source record: 35977
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard <nearlynews_email@ntlworld.com> wrote in message
news:b831of$5tl23$1@ID-150848.news.dfncis.de...
> Hi. I'm in the UK and need some plexiglass or similar material. Needs
> to be pretty thick, about 1/4" or just under. It's for a roller
> coaster. Original material looks like bakelite or maybe thick paxolene,
> probably paxoline.

Plexiglass is called Perspex in the UK. Paxolin is not recommended for anything that has to handle even moderate power or voltage - it absorbs moisture and goes lossy.

You should find plastics suppliers in Yellow pages - one I've used is Amari Plastics in Hedge End, near Southampton but I've no idea if they're still there. Another material to consider is glassfibre circuit board. Try a local pcb manufacturer, they are very likely to have pieces of thick material, often without any copper, in the offcuts bin.

For top notch material, ask the plastics people if they can source 'rexolite' (that's it's US trade name). Chemically I think it's cross linked polystyrene, but it's really good at rf.

Steve

2975. Eimac 8877 Tube & Socket For Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 14:56:05 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <9Kcpa.1891$zN4.2423386@kent.svc.tds.net>
Source record: 35978

Hi All,
I have 1 Eimac 3CX1500A7 (8877) tube for sale. The tube is used, but is full output and guaranteed to be as such. Included is 1 Eimac porcelain socket assembly with grid to ground tabs. The socket is used, but is in great shape. I will sell the pair for $350, shipping in the CONUS included. Overseas shipping slightly more. Please call (317) 892-2641 or email.

Thanks,
Jeff Weinberg W8CQ

2976. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 15:00:03 UTC
From: Roger Leone <arleone.takethisout.@inreach.com>
Message-ID: <tOcpa.296$SQ4.72@news.inreach.com>
Source record: 35979

Stephane:

You might consider something a little different. I saw some information on the web about using a stepper motor as a digital encoder for a frequency synthesizer. Turning the shaft of the motor generated pulses to drive the electronics.

Stepper motors can be removed from many devices, including old computer disk drives, tape players, etc.

I'm sorry, I can't find the URL for it now, but perhaps someone else will have it.

73,

Roger K6XQ

2977. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 15:37:03 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b83niu$7ae$1@titan.btinternet.com>
Source record: 35980
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b831of$5tl23$1@ID-150848.news.dfncis.de...
> Hi. I'm in the UK and need some plexiglass or similar material. Needs
> to be pretty thick, about 1/4" or just under. It's for a roller
> coaster. Original material looks like bakelite or maybe thick paxolene,
> probably paxoline.
>
> Anyone here buy this kind of stuff, and if so, can you recomend a
> supplier?

An old timer at the Acton, Brentford and Chiswick radio club used to make roller coasters on his lathe out of plastic drain pipe. They were quite neat units.

Tufnol are probably still around, their material used to be popular for that sort of thing. You can also get perspex tube from plastics suppliers.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2978. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 15:53:36 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b83oe1$613gr$1@ID-150848.news.dfncis.de>
Source record: 35981
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:b83niu$7ae$1@titan.btinternet.com...

> Tufnol are probably still around, their material used to be popular
for that
> sort of thing. You can also get perspex tube from plastics suppliers.

I don't know what this stuff I I have that is on this old roller coaster unit. It could be Tufnol. It's brown, shiney outside, and it looks to have a laminated construction. Probably is Tufnol rather than Paxoline.

I don't have to have Tufnol, but need something similar. Something that is not going to cost a fortune. Of the two, Tufnol might be better than Perspex, but I don't know. Maybe there is something better still, that is about the price of Perspex or Tufnol.

2979. help needed for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 17:05:03 UTC
From: Ben Veen <ben_veen@Hotmail.com>
Message-ID: <b83snu$248$1@news.tudelft.nl>
Source record: 35982

Hello,

I need help to do an experiment.

I have to design a system which can send 2 MByte of data over the world. I want to use a Fritzel GPA30 vertical antenna for that which can receive data at 14/21/28 MHz. I found some-one in the Netherlands that has such a system and now I am searching for somebody in the world to send a 2 Mbyte of data. The most ideal situation would be if it is a QuickTime movie. Also good is other data.

Do you know anybody who can send something at a given time and place to provide me with practical information about how the system works?

Greetings and thanx in advance.

Ben

2980. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 17:07:50 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b83spa$62h6n$1@ID-150848.news.dfncis.de>
Source record: 35983
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:b83oe1$613gr$1@ID-150848.news.dfncis.de...

> I don't know what this stuff I I have that is on this old roller
coaster
> unit. It could be Tufnol. It's brown, shiney outside, and it looks to
> have a laminated construction. Probably is Tufnol rather than
Paxoline.

Actually they are both Bakelite. Lots of trade names for bakelite
(Phonelic Resins).

http://www.sintetica.de/archive/body_archive.htm

I think bakelite is okay for RF purposes. Especially certain grades,
"Kite Brand" perhaps.

There ought to be and probably is a website that discusses relative
merits of materials for use in RF situations.

2981. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 18:34:10 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vab2pucnefes86@corp.supernews.com>
Source record: 35984

DigiKey and other have an amazing variety of shaft encoders, both optical and mechanical. They can be quite small, DigiKey has some nice little 9 mm encoders. They also can be quite inexpensive ... many are less than $3 U.S.

However, depending on your intentions, you probably want something that doesn't have detents, and you probably want lots of pulses per turn. This combination rachets the price right up.

..

"Stephane Rey" <stephane.rey@netcourrier.com> wrote in message news:1103_1051009171@news.wanadoo.fr...
> Hello,
>
> I'm designing a transceiver and I would add for the
> frequency adjsutment a coder like the ones we can found
> on the HF transceivers..
>
> I've ever seen some coder but with holes and I would like
> something as I've on my TS440 from Kenwood.
>
> I've guessed to build an optical one with a disc and holes
> and infrared sensor, but it's not a modern way and it's too
> big.
> I'm looking for a no expensive solution.
>
> If you have some parts and suppliers to recommend to me it
> will be the welcome.
>
> Thanks
> Stephane REY
> F1TJJ
>
>
>
>

2982. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 19:22:25 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3ea59631$0$129$edfadb0f@dtext02.news.tele.dk>
Source record: 35985

Hello Stephane

> I've guessed to build an optical one with a disc and holes
> and infrared sensor, but it's not a modern way and it's too
> big.
> I'm looking for a no expensive solution.

Use the parts from an old mouse, for the optical disk you design
your own and print it on a sheet of overheadfilm.

You might get some ideas here

http://www.twistygrip.com/spinners/spinners.htm

Regards

Max

2983. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 20:13:04 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b84833$d7v$1@nyytiset.pp.htv.fi>
Source record: 35986

"Roger Leone" <arleone.takethisout.@inreach.com> schrieb im
Newsbeitrag news:tOcpa.296$SQ4.72@news.inreach.com...
> Stephane:
>
> You might consider something a little different. I saw some
information on
> the web about using a stepper motor as a digital encoder for a
frequency
> synthesizer. Turning the shaft of the motor generated pulses
to drive the
> electronics.
>
> Stepper motors can be removed from many devices, including old
computer disk
> drives, tape players, etc.
>
> I'm sorry, I can't find the URL for it now, but perhaps someone
else will
> have it.

http://members.iinet.net.au/~richardh/Rotenc.htm
http://www.hut.fi/~jwagner/electr/rotary-enc/

It doesn't work _that_ well compared to a real tuning wheel,
although it really works quite well. At least the one I built has
slightly too few steps per turn to make turning it an all day
long enjoyment... ;-)) (maybe a different stepper motor would
work better)

cheers,
- Jan

2984. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 20:33:00 UTC
From: Stephane Rey <stephane.rey@netcourrier.com>
Message-ID: <1103_1051043580@news.wanadoo.fr>
Source record: 35987

Thanks for these ideas, I will investigate more...
Regards
Stephane

Le Tue, 22 Apr 2003 08:00:03 -0700, "Roger Leone"
<arleone.takethisout.@inreach.com> a ï¿½crit :
> Stephane:
>
> You might consider something a little different. I saw
some information on
> the web about using a stepper motor as a digital encoder
for a frequency
> synthesizer. Turning the shaft of the motor generated
pulses to drive the
> electronics.
>
> Stepper motors can be removed from many devices,
including old computer disk
> drives, tape players, etc.
>
> I'm sorry, I can't find the URL for it now, but perhaps
someone else will
> have it.
>
> 73,
>
> Roger K6XQ
>
>

2985. Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 20:51:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b84a0l$a1s$1@sparta.btinternet.com>
Source record: 35988

NEW PROGRAM now available.

Analysis of 1/2-wave resonant Inverted-V and dipole antennas with either coaxial or balanced-twin feedlines.

Includes all the geometry/trigonometry to ensure it will fit into your back yard.

Download program INV_VEE.exe from website below.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

2986. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 21:17:09 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b84btsgat1@nyytiset.pp.htv.fi>
Source record: 35989

"Lasse SM5GLC" <no_email@today.sri> schrieb im Newsbeitrag
news:krp8avouei1okqfirn54tf2otfod7kefrt@4ax.com...
> Jan,
> I would try to clock the chip directly, i.e. using the 50 MHz
clock
> and not use the PLL.

Thanks, done that already, but it's much worse than with no PLL
for a given freq. As expected, really. Btw some 200MHz <25ps
peak-peak jitter <5ps rms jitter SAW oscillators should arrive
soon - I hope it works better with one of these.

About measuring: It's hard to say which equipment to trust - my
really ancient 10MHz analog scope shows a nice and clean sine
wave up to the freq the CRT is still readable, but OTOH, the much
newer and in all aspects more reliable 100MHz digital
scopemeter - with internal 20MHz lowpass filter toggled on -
shows "wobbles" and glitches along the sine curve. I'll go lend
another analog scope to triple check...

In theory, the DDS output filters I use should have
between -110dB to -100dB from 100 to 200MHz, IIRC. Maybe the
"standard" small 0805 size chip inductors aren't suited? What
type of filter components did you use?

Another alternative is that the filter is too steep, and the
"wobbles" are transfer function <=> inverse Fourier => time
domain sinc(x) function convolution with the input signal (sounds
like dead wrong maths, but _maybe_...)

> I'll see if I get some spare time to try a demo board from AD
using
> 9850(?) and check the jitter. If so I will post the result for
you to
> compare.

Yeah, would be interesting if you could post some numbers! :-)

- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

2987. Re: Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 21:56:00 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vabed2fd696pd3@corp.supernews.com>
Source record: 35990

Mike Andrews wrote:
> Tracy Fort <beerbarrel@cox.net> wrote:
>
>>Anybody ever have a good experience with these folks?
>>Tracy Fort
>
>
> I bought some small pliers, hemostats, tuning tools, and O-scope
> probes from them. All arrived reasonably quickly and in good order.
> No gripes, but nothing to brag about, either.
>

I placed an order once and most of my list was not in stock. Therefore
they cancelled my order and didn't notify me!
-Bill M

2988. Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 22:02:50 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vabepsokj4d4bb@corp.supernews.com>
Source record: 35991
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

I forget the exact title, Solid-State Handbook or Solid State for Radio
Amateurs?
Came out in the 70s.
Cndx not important.

TIA,
Bill WX4A
exray at caribe.net

2989. Re: Oceanstate Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 22:25:00 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <f7gbavo30kltnn2c2qgaktcvnb1s9uv10n@4ax.com>
Source record: 35992

OK...I was wondering if anyone else had problems. I ordered some stuff
from them that I needed. I also ordered some stuff that I did not need
but wanted anyway. Thay did not have what I needed it was out of
stock. They went ahead and sent the other items without contacting me
to let me know that they did not have the other items. I would have
cancelled the order had I known they were out of stock. It also took
them 3 weeks to get it to me. That is from Rhode Island to Georgia. I
was a little upset but got over it. I guess I will shy away from them
from now on or at least call them in person to make sure they have
what I want.

Tracy
Thanks for the coil forms Bill....They will work perfect....and the
tube...

On Tue, 22 Apr 2003 17:56:00 -0400, --Bill M-- <no.@mo-.spam> wrote:

>Mike Andrews wrote:
>> Tracy Fort <beerbarrel@cox.net> wrote:
>>
>>>Anybody ever have a good experience with these folks?
>>>Tracy Fort
>>
>>
>> I bought some small pliers, hemostats, tuning tools, and O-scope
>> probes from them. All arrived reasonably quickly and in good order.
>> No gripes, but nothing to brag about, either.
>>
>
>I placed an order once and most of my list was not in stock. Therefore
>they cancelled my order and didn't notify me!
>-Bill M

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

2990. Radio website

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 23:01:35 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3ea5ca44@news.alphalink.com.au>
Source record: 35993

Projects, QRP, newcomers info, scanning, listening, CB
radio and more.

Days of reading!

Visit http://www.alphalink.com.au/~parkerp/radio.htm

73, Peter VK3YE

--

Peter Parker
E-mail: parkerp @ alphalink . com . au

URL: http://www.alphalink.com.au/~parkerp Amateur Radio VK3YE - Melbourne
Transport - Writing
Monitoring VK3RMS 53.900 MHz 7am - 10pm

2991. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-22 23:51:59 UTC
From: DrGrok@mungednet.com
Message-ID: <b84k9i$nn2$2@bob.news.rcn.net>
Source record: 35994

In article <15698-3EA4B0E5-106@storefull-2315.public.lawson.webtv.net>,
dialcover@webtv.net (Bill Turner) wrote:
>Adel nibbling tool works well. Bill
>

And a Dremel tool with a cut-off wheel -- got a nice clean cut the first time
I tried.

Dr. G.

2992. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 00:59:18 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b84oh6$53p$1@freenet9.carleton.ca>
Source record: 35995
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

--Bill M-- (no.@mo-.spam) writes:
> I forget the exact title, Solid-State Handbook or Solid State for Radio
> Amateurs?
> Came out in the 70s.
> Cndx not important.
>
> TIA,
> Bill WX4A
> exray at caribe.net
>
Is this the one by Doug DeMaw and Wes Hayward, which came out in
1977, sort of a greyish cover? It was called "Solid State Design
for the Radio Amateur".

The ARRL did keep it in print up to at least a few years ago.
Unless saving money is the key, you might see if they still
have any copies.

Michael VE2BVW

2993. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 01:36:37 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1051061795.954754@auth2.dns.griffin.net.uk>
Source record: 35996
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

cheap supplier of perspex is your local sign shop..

ie the one that makes shop front signs..ie around the back in their scrap bin..i have picked up lots before and most of them will give it to you...max 6mm thick ..

g0zen
"Richard" <nearlynews_email@ntlworld.com> wrote in message news:b831of$5tl23$1@ID-150848.news.dfncis.de...
> Hi. I'm in the UK and need some plexiglass or similar material. Needs
> to be pretty thick, about 1/4" or just under. It's for a roller
> coaster. Original material looks like bakelite or maybe thick paxolene,
> probably paxoline.
>
> Anyone here buy this kind of stuff, and if so, can you recomend a
> supplier?
>
> TIA. Rich.
>
>

2994. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 01:41:13 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vabrjba2991b1f@corp.supernews.com>
Source record: 35897
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Michael Black wrote:
> --Bill M-- (no.@mo-.spam) writes:
>
>>I forget the exact title, Solid-State Handbook or Solid State for Radio
>>Amateurs?
>>Came out in the 70s.
>>Cndx not important.
>>
>>TIA,
>>Bill WX4A
>>exray at caribe.net
>>
>
> Is this the one by Doug DeMaw and Wes Hayward, which came out in
> 1977, sort of a greyish cover? It was called "Solid State Design
> for the Radio Amateur".
>
> The ARRL did keep it in print up to at least a few years ago.
> Unless saving money is the key, you might see if they still
> have any copies.
>
> Michael VE2BVW
>
>
Thats probably it. I checked the arrl site and couldn't find any
mention of it.
-Bill

2995. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 02:26:14 UTC
From: Bob Pierfelice <"kb8tl AT yahoo DOT com">
Message-ID: <vabuembkudnuc9@corp.supernews.com>
Source record: 35898
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Check this http://www.rfparts.com/arrlbook.html
I just did a Yahoo search on the title.....
I have an early copy and it is still an excellent book, use it frequenyly.
In fact I better get another copy as mine is getting real raggy..
Bob
kb8tl

"--Bill M--" <no.@mo-.spam> wrote in message
news:vabepsokj4d4bb@corp.supernews.com...
> I forget the exact title, Solid-State Handbook or Solid State for Radio
> Amateurs?
> Came out in the 70s.
> Cndx not important.
>
> TIA,
> Bill WX4A
> exray at caribe.net
>

2996. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 02:29:38 UTC
From: robrkx@nidhog.net
Message-ID: <3EA5FA92.93CE0BBC@nidhog.net>
Source record: 35899

Think there's a new version out.

2997. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 02:43:09 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vabv7fifsroj53@corp.supernews.com>
Source record: 35900

robrkx@nidhog.net wrote:
> Think there's a new version out.

Thanks, Bob and robrkx. I have learned since the original post that I'm specifically looking for the 'original flavor' version from the late 70s, Solid State Design for the Radio Amateur.
Tnx,
Bill

2998. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 03:52:33 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b852m1$ru3$1@freenet9.carleton.ca>
Source record: 35901

(robrkx@nidhog.net) writes:
> Think there's a new version out.

I think they had a real reprinting at some point, complete with
a slightly different (maybe in color) cover. I remember excitedly
looking through it, thinking it had been updated, but it was
the same book.

What there is is "Experimental Methods in RF Design" by Wes
Hayward, Rick Campbell, and Bob Larkin which was just published
a month or two by the ARRL. They say it's the successor.

In a quarter century, I suspect they have pretty much brought
in new material, though likely the topics are the same (and greater).
I've yet to buy it.

But "Solid State Design for the Radio Amateur" is a book in itself,
and unless it becomes a collectors edition with collector's prices,
good to have no matter what other books you have. Like all
books that I use and rely on, I'm not happy that it would seem
to be out of print. I have plenty of books that are falling apart,
and I have to wait to stumble on replacements.

Michael VE2BVW

2999. Re: which coder for frequency adjusting ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 08:02:11 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <7Mrpa.75421$ja4.4991110@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35903

32 bits per revolution seems to work out ok. I've used some of the Oak
Grisby encoders, but Grayhill and Bourns also have something similar, in the
30 dollar range.

Pete

Max <Max_Jens@post9.tele.dk> wrote in message
news:3ea59631$0$129$edfadb0f@dtext02.news.tele.dk...
> Hello Stephane
>
> > I've guessed to build an optical one with a disc and holes
> > and infrared sensor, but it's not a modern way and it's too
> > big.
> > I'm looking for a no expensive solution.
>
> Use the parts from an old mouse, for the optical disk you design
> your own and print it on a sheet of overheadfilm.
>
> You might get some ideas here
>
> http://www.twistygrip.com/spinners/spinners.htm
>
> Regards
>
> Max
>
>

3000. Re: project help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 08:11:00 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <oUrpa.75423$ja4.4988916@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35904

I would do a Google search on "inverting summing op-amp circuits". This would give you a simple way to go. There are plenty of single supply op amps available. You could then run the op-amp output into a simple IC audio amplifier circuit.

Pete

Dr. Anton Squeegee <SpammersAreVermin@dev.nul> wrote in message news:MPG.1908eb9ad91fb31989872@192.168.42.131...
> In article <JPFna.43657$Y57.28267@fe05.atl2.webusenet.com>,
> nospam@bogusaddress.com says...
>
> > I would like to connect three radios to ONE amplified speaker. So far as I know it would not be good to simply connect all three
> > radios audio in parallel, so how can it be done? A mixer ... too expensive.
>
> By who's definition? Op-amps are not difficult to work with, nor
> are they particularly expensive. Seems like a few hours of design effort
> could do everything you need.
>
> What I'm doing for my van, since I have multiple transceivers and a
> scanner, is adapting a surplus aircraft audio panel to the task. It has
> several inputs, and is designed to drive either a single speaker or a
> couple of headsets. I bought it on Ebay for about $50, and got the manual
> for it (which included full schematics) for another $30 or so from the
> manufacturer.
>
> You may want to try the same thing. But, as others have pointed
> out, the 'priority' scheme you seem to want will not be easy or cheap to
> implement.
>
>
> --
> Dr. Anton Squeegee, Director, Dutch Plumbing Institute.
> (Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com)
> kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
> "Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy Builder")

3001. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 08:12:38 UTC
From: "Dr. Rev. Chuck, M.D. P.A." <cdub@_REMOVETHIS_erols.com>
Message-ID: <3EA64AF6.1757@_REMOVETHIS_erols.com>
Source record: 35902

OK1SIP wrote:
>
> Hi Eniac,
> look at http://hamradio.online.ru/cap2.htm The variable capacitor has
> a semi-cylindrical shape of electrodes. IMHO, its construction can be
> simplified even more, if one makes the rotor from a glass tube with
> copper or aluminum foil glued inside and the stator from a piece of
> metal tube or sheet metal. The capacitance would be changed by
> rotating the glass tube in the stator.
>
> 73 Ivan OK1SIP

Watch the glass. Common grades don't insulate nearly as well as
Pyrex, due to impurities. I tried for years to make Leyden jars
from old peanut butter jars with no success. First trial with a
Pyrex food storage jar turned Leyden jar made the difference clear,
and in no uncertain terms.

3002. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 08:26:56 UTC
From: Dave Turner <dmturner@primenet.com>
Message-ID: <7ejcavshfpo7peuncb27tu624k29732ee8@4ax.com>
Source record: 35905
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

--Bill M-- <no.@mo-.spam> wrote:

>I forget the exact title, Solid-State Handbook or Solid State for Radio
>Amateurs?
>Came out in the 70s.
>Cndx not important.

That book has been replaced by:

Experimental Methods in RF Design

But it isn't cheap!

See:

http://www.arrl.org/catalog/index.php3?category=Technical%2C+Electronics%2C+and+Communications+Reference

Sorry but I won't sell my copy of the old Solid State design book.

Regards,

Dave

3003. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 09:41:53 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Pgtpa.2313$%K5.640477@newsfep2-win.server.ntli.net>
Source record: 35906

> > Think there's a new version out.
>
> I think they had a real reprinting at some point, complete with
> a slightly different (maybe in color) cover. I remember excitedly
> looking through it, thinking it had been updated, but it was
> the same book.
>
> What there is is "Experimental Methods in RF Design" by Wes
> Hayward, Rick Campbell, and Bob Larkin which was just published
> a month or two by the ARRL. They say it's the successor.
==========
FYI , I bought the 3rd Printing -1995 ,256 pages , in 1997 from one of the
Ham Radio Outlets for $ 15.00
It is one of the most stimulating 'homebrew' publications I have ever seen.

The above new book , including CD-ROM (I am going to order) costs $ 49.95

Frank gm0csz.kn6wh@ntlworld.com

3004. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 10:19:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vacq5ppi5iki89@corp.supernews.com>
Source record: 35907
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

If the original book had the 509 pages of the new one and cost the same amount per page, it would sell for $42.25 in today's dollars. But you get a CD with the new book for the extra $7.70.

Roy Lewallen, W7EL

Dave Turner wrote:
> --Bill M-- <no.@mo-.spam> wrote:
>
>
>>I forget the exact title, Solid-State Handbook or Solid State for Radio
>>Amateurs?
>>Came out in the 70s.
>>Cndx not important.
>
>
> That book has been replaced by:
>
> Experimental Methods in RF Design
>
> But it isn't cheap!
>. . .

3005. Re: Wanted: ARRL Solid-State book

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 12:33:00 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vad1pcnil18e82@corp.supernews.com>
Source record: 35908
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Thanks guys, I have found one.
73,
Bill

Dave Turner wrote:
> --Bill M-- <no.@mo-.spam> wrote:
>
>
>>I forget the exact title, Solid-State Handbook or Solid State for Radio
>>Amateurs?
>>Came out in the 70s.
>>Cndx not important.
>
>
> That book has been replaced by:

3006. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 14:19:51 UTC
From: ^2@vc.net
Message-ID: <^2-2304030719520001@207.178.185.199>
Source record: 35909

In article <b84a0l$a1s$1@sparta.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> NEW PROGRAM now available.
>
> Analysis of 1/2-wave resonant Inverted-V and dipole antennas with either
> coaxial or balanced-twin feedlines.
>
> Includes all the geometry/trigonometry to ensure it will fit into your back
> yard.
>
> Download program INV_VEE.exe from website below.
> ---
** 468/f seems to work ok.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3007. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 14:40:53 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3EA6A796.2C54AC49@uwe.ac.uk>
Source record: 35910
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:b83oe1$613gr$1@ID-150848.news.dfncis.de...
>
> > I don't know what this stuff I I have that is on this old roller
> coaster
> > unit. It could be Tufnol. It's brown, shiney outside, and it looks to
> > have a laminated construction. Probably is Tufnol rather than
> Paxoline.
>
> Actually they are both Bakelite. Lots of trade names for bakelite
> (Phonelic Resins).
>
> http://www.sintetica.de/archive/body_archive.htm
>
> I think bakelite is okay for RF purposes. Especially certain grades,
> "Kite Brand" perhaps.
>
> There ought to be and probably is a website that discusses relative
> merits of materials for use in RF situations.

You said you needed 6 mm at least so I'm assuming you need to mend
an end plate? Perspex will do the job O.K. A little harder to work
than Tufnol, as it tends to crack if stressed, water is a good
cutting lubricant/cooler. I don't think Perspex would be a good
choice for the coil support, as it is easy to melt if you dissipate
any power in the inductor.

RS sell several grades of Tufnol, ranging from ï¿½20 to ï¿½70 per
580 x 290 mm sheet, 10 mm thick. Smaller quantities are unobtainium,
AFAIK.

You'll need to find somewhere that uses perspex to get small pieces
as off cuts. Let me know direct the dimensions of the piece you need
and I'll look in my shed. I can probably find ~30 mm x 10 mm x lots.
Wider pieces tend to be thinner. All mine came from judicious skip
harvesting.

vy 73

Andy, M3ABC

3008. Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 17:07:20 UTC
From: wa5bdu@yahoo.com
Message-ID: <ca1a467b.0304230907.1932efff@posting.google.com>
Source record: 35911

I recently decided to build my first ever "linear" amplifier, a 10 watt design with two transistors in push-pull. It used binocular (two hole) balun cores for the input and output transformers. I thought those cores were kind of intriguing as to how they compare to toroid shapes. In discussions, I learned that they gave a higher coefficient of coupling in transformers. Also that you could make your own by gluing together parallel stacks of beads. So a common magnetic path for the two halves isn't needed? And, someone said, you can get half turns with one of these, but not with a toroid. Half turns?

If you sketch out an end view, with current entering one hole and coming out the other, you can see why magnetic coupling isn't needed or wanted between the two halves. If currents are equal, the fields from each side will cancel due to symmetry. And if they didn't cancel, the flux from one side would actually reduce the inductance when it links the other side, because it's "going the wrong way."

The half turn thing was kind of hard to believe, so I made some measurements on a BLN-43-202 core including whole and half turns and plotted L versus turns squared. The points fell on a straight line, so I guess that works.

Finally, getting to the question (almost). I was trying to figure the power output of my amplifier from the transformed load resistance with the familiar R = (Vcc^2)/2Po rule. But it's a little complicated by the fact that the transformer is center tapped on the input side. The transformer has one turn on the primary and two on the secondary. The primary is U-shaped. Its free ends are connected to the collectors of the two transistors. At the other end of the core, where the conductor exits one hole and reenters the other, is the center tap point that connects to Vcc. Tapped at one-half turn, I guess you'd say.

Now look at the action of the transformer. I guess it's accurate to say that the transistors take turns conducting on alternating half cycles. So in a given half cycle, one half of the transformer is a transformer, with 2:1 ratio. The other half doesn't have any primary current driven through it. But the secondary turns do go through it, so it's really an inductive load in series with the transformer and load. Is that right? Doesn't seem like it could be, given that this circuit is popular and it works. What's really going on? Is some phenomenon I don't see balancing the currents? Should I not worry about it and just get a life?

73--Nick, WA5BDU
in Arkansas

3009. Re: How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 17:54:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304230954.3e8c10c3@posting.google.com>
Source record: 35912

I'm a little surprised that after a day I haven't seen any other replies to this. I'll take a stab at it.

I suppose most people these days would use a fields program to iteratively get the design they want. Certainly there are some folk around that would understand the fields well enough that they would just work it out on paper. But I think you can do fine by just building a section of line with air dielectric and of the impedance you wish, and putting a straight wire parallel to the axis of the line, between the inner and outer conductor. Adjust the spacing to get the coupling you wish. Put the wire nearer the outer conductor for lower coupling. If you load each end of the coupled wire with the right resistance, the response should be proportional to "forward voltage" at one end and "reverse voltage" at the other, as the drop across each resistor is the sum of currents from a capacitively-coupled component (same polarity across each resistor) and an inductively-coupled component (out of phase in the two resistors, as it is current around a loop).

It can be very convenient if the load resistors are each 50 ohms. By adjusting the geometry, you should be able to make 50 ohm loads work. "Details left as an exercise for the reader."

I know that there have been construction articles for such couplers. I believe in the old ARRL VHF manuals there was one or more such article. More modern books probably have them as well. There may even be some decent ones posted on the web.

By the way, if you build it carefully, you should be able to get phase as well as amplitude information from it. Obviously, I did not mention how to detect the RF at each port, but certainly it is possible to detect both the amplitudes and the relative phase, which can be much more useful than just the SWR which considers amplitude only.

Cheers,
Tom

Stephane Rey <stephane.rey@netcourrier.com> wrote in message news:<1103_1051007744@news.wanadoo.fr>...
> In order to design a SWR/Watt-meter, I would like to design
> a directive coupler where the direct and indirect voltages will
> be available. I wouldn't like to use PCB option because I
> would measure about 50W.
> I've ever seen some description, but I would like to find
> information on how to compute and design this coupler.

> The frequencies on which I would like to work are 2m and
> 70cm.
>
> Thanks
> Regards
>
> Stephane REY
> F1TJJ

3010. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 22:47:22 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <_JEpa.41709$cO3.3183755@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35913

And make sure to use your safety goggles for when that first disc
disintegrates... lol

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Dr. Grok" <DrGrok@mungednet.com> wrote in message
news:b84k9i$nn2$2@bob.news.rcn.net...
> And a Dremel tool with a cut-off wheel -- got a nice clean cut the first
time
> I tried.
>
> Dr. G.

3011. Re: Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 22:48:57 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <tLEpa.41710$cO3.3183685@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35914

No half turns...

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Nick Kennedy" <wa5bdu@yahoo.com> wrote in message
news:ca1a467b.0304230907.1932efff@posting.google.com...
> I recently decided to build my first ever "linear" amplifier, a 10
> watt design with two transistors in push-pull. It used binocular (two
> hole) balun cores for the input and output transformers. I thought
> those cores were kind of intriguing as to how they compare to toroid
> shapes. In discussions, I learned that they gave a higher coefficient
> of coupling in transformers. Also that you could make your own by
> gluing together parallel stacks of beads. So a common magnetic path
> for the two halves isn't needed? And, someone said, you can get half
> turns with one of these, but not with a toroid. Half turns?

3012. Dayton and Baggy Bob

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 22:54:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vae7mmrfledg4b@corp.supernews.com>
Source record: 35915

Does anyone know if Baggy Bob will be at the Hamvention? Anyone have a booth number for him?

..

3013. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 23:22:04 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b8776s$pa4$1@freenet9.carleton.ca>
Source record: 35919

"Brian Griffey" (briangriffey@worldnet.att.net) writes:
> And make sure to use your safety goggles for when that first disc
> disintegrates... lol
>
I was at Sear's last week for the first time in a few years, and
took some time to look over the tools. There were a number of Dremel
accessories that I hadn't seen before. One was a gizmo that held
the Dremel tool for cutting things. It seemed like one was supposed
to use a carving bit, and the gizmo held the tool vertically against
the surface to be cut. It looked like it might be useful for cutting
circuit board, but it was about $20 Canadian and I wasn't feeling like
spending the money to check, at least not at the moment.

Those cutting discs are great, but they aren't that useful when
cutting away from the edge of the board. The rest of the tool hits
the surface before the cutting wheel has a chance to reach the
board. I suppose one could cut at an angle, but this would only
increase the breakage of the discs.

Michael VE2BVW

>
>
> "Dr. Grok" <DrGrok@mungednet.com> wrote in message
> news:b84k9i$nn2$2@bob.news.rcn.net...
>> And a Dremel tool with a cut-off wheel -- got a nice clean cut the first
> time
>> I tried.
>>
>> Dr. G.
>
>

3014. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 23:22:21 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vae7qsfc0a77bb@corp.supernews.com>
Source record: 35916

Brian Griffey wrote:
> And make sure to use your safety goggles for when that first disc
> disintegrates... lol
>

I love my Dremel but its the scariest power tool I own!

-Bill

3015. Re: Cutting PC board material

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 23:23:55 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <fgFpa.41745$cO3.3185306@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35917

How true... it is an excellent tool for certain "cutting" jobs where access
is minimal!

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"--Bill M--" <no.@mo-.spam> wrote in message
news:vae7qsfc0a77bb@corp.supernews.com...
> I love my Dremel but its the scariest power tool I own!

3016. Re: How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-23 23:27:52 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3EA721DE.1521DFE3@ieee.org>
Source record: 35918

Tom Bruhns wrote:

> I'm a little surprised that after a day I haven't seen any other
> replies to this. I'll take a stab at it.
>
> I suppose most people these days would use a fields program to
> iteratively get the design they want. Certainly there are some folk
> around that would understand the fields well enough that they would
> just work it out on paper. But I think you can do fine by just
> building a section of line with air dielectric and of the impedance
> you wish, and putting a straight wire parallel to the axis of the
> line, between the inner and outer conductor. Adjust the spacing to
> get the coupling you wish. Put the wire nearer the outer conductor
> for lower coupling. If you load each end of the coupled wire with the
> right resistance, the response should be proportional to "forward
> voltage" at one end and "reverse voltage" at the other, as the drop
> across each resistor is the sum of currents from a
> capacitively-coupled component (same polarity across each resistor)
> and an inductively-coupled component (out of phase in the two
> resistors, as it is current around a loop).
>
> It can be very convenient if the load resistors are each 50 ohms. By
> adjusting the geometry, you should be able to make 50 ohm loads work.
> "Details left as an exercise for the reader."
>
> I know that there have been construction articles for such couplers.
> I believe in the old ARRL VHF manuals there was one or more such
> article. More modern books probably have them as well. There may
> even be some decent ones posted on the web.
>
> By the way, if you build it carefully, you should be able to get phase
> as well as amplitude information from it. Obviously, I did not
> mention how to detect the RF at each port, but certainly it is
> possible to detect both the amplitudes and the relative phase, which
> can be much more useful than just the SWR which considers amplitude
> only.
>
> Cheers,
> Tom

Also The length of the line should (I think) be short in relation to the line wavelength. Also the length will affect the coupling.

Tom do you want to add more details regarding this.

Bill K7NOM

3017. Re: Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 00:32:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b87ba9jks1@titan.btinternet.com>
Source record: 35920

Half turns?
==========

Easy!

Two parallel ferrite cylinders. One 1/2 turn goes up one cylinder and the other 1/2 turn back down the other. The ends of the single (or N) turns are connected to the collectors of the push-pull output transistors. The DC supply is connected to the half-turn(s) at the opposite ends of the cylinders from the transistor-pair.

For a simple circuit analysis and impedance matching involving a pair of parallel ferrite cylinders download in a few seconds small program LINEAR1 from website below. No unzipping inconvenience, run immediately. Just remember impedance matching must go in STEPS of impedance or rather voltage ratios.

Download program LINEAR1 for design of simple push-pull transistor, class AB, HF linear power amplifier. You will need to think clearly about what you are doing. It turns out you are not involved with impedance but voltage ratios. Voltages depend on DC power supply volts and load resistance and not on the internal impedances of the transistors. Knowledge of transistor internal impedance is unnecesary. KISS.

=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================

3018. Re: Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 01:04:03 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <7KGpa.76376$ja4.5063898@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35921

I'm a bit confused with your reply... are you saying that half turn ratios
are possible with the balun core. I claim they're not.

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
See the SkyWave Linear Amplifier at
http://home.att.net/~briangriffey/Index.html
$130 through April03!
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b87ba9jks1@titan.btinternet.com...
> Half turns?
> ===============
>
> Easy!
>
> Two parallel ferrite cylinders. One 1/2 turn goes up one cylinder and the
> other 1/2 turn back down the other. The ends of the single (or N) turns
are
> connected to the collectors of the push-pull output transistors. The DC
> supply is connected to the half-turn(s) at the opposite ends of the
> cylinders from the transistor-pair.
>
> For a simple circuit analysis and impedance matching involving a pair of
> parallel ferrite cylinders download in a few seconds small program LINEAR1
> from website below. No unzipping inconvenience, run immediately. Just
> remember impedance matching must go in STEPS of impedance or rather
voltage
> ratios.
>
> Download program LINEAR1 for design of simple push-pull transistor, class
> AB, HF linear power amplifier. You will need to think clearly about what
you
> are doing. It turns out you are not involved with impedance but voltage
> ratios. Voltages depend on DC power supply volts and load resistance and
not
> on the internal impedances of the transistors. Knowledge of transistor
> internal impedance is unnecesary. KISS.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com

> ==========

3019. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 01:28:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b87ek9ste1@sparta.btinternet.com>
Source record: 35922

> ** 468/f seems to work ok.
==========

You've been reading old-wives' tales again.

Of course, with radio, any bloody thing will WORK.

At least it might work good enough for YOU.

But there have been 300 world-wide downloads of this program in the last 24 hours which indicates 468/f does not work very well when it comes to very low Inverted-V's.

Within minutes of the program being available on the newsgroups there was an e-mail from a station wishing the program had been available a week earlier.

He had just spent condiderable time and labour pruning in little bits the wire down to size after initially errecting a wire several feet longer than necessary just to be on the safe side.

He ended-up with the same antenna length as predicted by the program. Or rather the same resonant frequency as predicted by the program for his particular antenna dimensions.

You have probably never had an Inverted-V, the poor man's high horizontal dipole. Nevertheless your comment is not altogether out of place. Thanks.

Reg, G4FGQ

3020. Re: Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 01:41:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b87fd5$4s5$1@hercules.btinternet.com>
Source record: 35923

Please try not to put words into my mouth.

I'm getting tired of people who come onto newsgroups for no other reason
than they like to argue.

What's a balun core?

Don't bother telling ME. I'm no longer interested.

3021. Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 04:38:32 UTC
From: antispam <nospam@please.net>
Message-ID: <b87ponmhf1@slb9.atl.mindspring.net>
Source record: 35924

Group gurus:

What effect does the dimension of the ferrite core have on the ability of a loopstick antenna to acquire a signal?

Put another way, suppose I have one ferrite core, say 1/2 inch in diameter and 4 inches long, and another the same diameter, but 8 inches in length? Any differences in the electrical characteristics of otherwise identical coils wound on each? Any differences in Q?

How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are corrected so each coil has the same inductance) Any DX advantages to a core of absurd dimensions (3 inches diameter, 3 feet in length?)

TIA

3022. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 05:34:28 UTC
From: --Bill M-- <no.@mo-.spam>
Message-ID: <vaetkjlnh1sq4f@corp.supernews.com>
Source record: 35925

antispam wrote:
> Group gurus:
>
> What effect does the dimension of the ferrite core have on the ability
> of a loopstick antenna to acquire a signal?
>
> Put another way, suppose I have one ferrite core, say 1/2 inch in
> diameter and 4 inches long, and another the same diameter, but 8 inches
> in length? Any differences in the electrical characteristics of
> otherwise identical coils wound on each? Any differences in Q?
>
> How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
> corrected so each coil has the same inductance) Any DX advantages to a
> core of absurd dimensions (3 inches diameter, 3 feet in length?)
>
> TIA
>
Hmmmm. I'm not sure what you are trying to re-invent but the basic
ferrite loop is in the range of 240uh/
Its not an antenna per se,,,its the rf coil for the converter stage.
You can play around with it however you choose but remember there were a
Lots of skilled guys that arrived upon the best parameters.
Tinkeriug is always a way to better learning,.

3023. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 06:04:57 UTC
From: antispam <nospam@please.net>
Message-ID: <b87uqi$68k$1@slb2.atl.mindspring.net>
Source record: 35926

--Bill M-- wrote:

> antispam wrote:
>
>> Group gurus:
>>
>> What effect does the dimension of the ferrite core have on the
>> ability of a loopstick antenna to acquire a signal?
>>
>> Put another way, suppose I have one ferrite core, say 1/2 inch in
>> diameter and 4 inches long, and another the same diameter, but 8
>> inches in length? Any differences in the electrical characteristics
>> of otherwise identical coils wound on each? Any differences in Q?
>>
>> How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
>> corrected so each coil has the same inductance) Any DX advantages to
>> a core of absurd dimensions (3 inches diameter, 3 feet in length?)
>>
>> TIA
>>
> Hmmmm. I'm not sure what you are trying to re-invent but the basic
> ferrite loop is in the range of 240uh/
> Its not an antenna per se,,,its the rf coil for the converter stage.
> You can play around with it however you choose but remember there were
> a Lots of skilled guys that arrived upon the best parameters.
> Tinkeriug is always a way to better learning,.
>
Bill,
I can build a simple receiver with a loopstick, cap, and diode. There is no converter. That simple receiver will pick up a.m. stations without the benefit of an external antenna of any kind. While the loopstick is part of the L/C tuning circuit, in this application it is also a receiving antenna in its own right.

I have a WWV receiver that uses a loopstick antenna for signal acquisition, and nothing else. I think the circuit that follows amounts to a TRF receiver with a PIC chip for extracting the time data. Different frequency, but the idea is the same.

So let me state the question again....given windings that yield an inductance appropriate for the specific application, is there any benefit to be derived from making the ferrite core either longer, larger in diameter, or both?

3024. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 07:36:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vaf50voqetbc26@corp.supernews.com>
Source record: 35927

There was an application book by National Semiconductor published in 1980 titled "Audio/Radio Handbook" which contains bits of information I haven't seen anywhere else. The following is from the "AM Radio" section:

The effective height of the [ferrite loopstick] antenna is a complex function of core and coil geometry, but can be approximated by:

Heff = (2 * pi * mur * N1 * A) / lambda

where

N1 = total number of turns
mur = relative permeability of antenna rod
(primarily function of length)
A = cross sectional area of rod
lambda = wavelength of received signal

It gives as a reference "Laurent, H.J. and Carvalho, C.A.B., 'Ferrite Antennas for AM Broadcast Receivers,' Application Note available from Bendix Radio Division of The Bendix Corporation, Baltimore, Maryland."

I recall that the Fair-Rite web site has graphs of effective permeability vs rod permeability and length. The Amidon flyer had these graphs also.

Roy Lewallen, W7EL

antispam wrote:
> Group gurus:
>
> What effect does the dimension of the ferrite core have on the ability
> of a loopstick antenna to acquire a signal?
>
> Put another way, suppose I have one ferrite core, say 1/2 inch in
> diameter and 4 inches long, and another the same diameter, but 8 inches
> in length? Any differences in the electrical characteristics of
> otherwise identical coils wound on each? Any differences in Q?
>
> How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
> corrected so each coil has the same inductance) Any DX advantages to a
> core of absurd dimensions (3 inches diameter, 3 feet in length?)
>
> TIA

>

3025. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 07:56:13 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <l26favs9mutn88npk380f022ie82a6rlk1@4ax.com>
Source record: 35928

In <b87ponmhf1@slb9.atl.mindspring.net>, antispam <nospam@please.net> wrote:

>Group gurus:
>
>What effect does the dimension of the ferrite core have on the ability
>of a loopstick antenna to acquire a signal?
>
>Put another way, suppose I have one ferrite core, say 1/2 inch in
>diameter and 4 inches long, and another the same diameter, but 8 inches
>in length? Any differences in the electrical characteristics of
> otherwise identical coils wound on each? Any differences in Q?
>
>How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
>corrected so each coil has the same inductance) Any DX advantages to a
>core of absurd dimensions (3 inches diameter, 3 feet in length?)
>
>TIA

Theoretically, increasing the core diameter increases the number of lines of flux captured from the external field (just like increasing the diameter of a coil or antenna wire), and therefore increases its sensitivity, all else being the same. But any ferromagnetic material creates noise because of the Barkhausen effect, which has already been determined to be the primary factor that limits the sensitivity of a ferrite rod antenna. IOW, a larger core will increase your signal, but it will also proportionally increase the amount of noise. So even if you do find an absurdly large core, your S/N ratio isn't going to improve beyond the limit that has already been established with commercial radios.

Increasing the length of the core will increase it's directivity, as you can see if you ever get the chance to play with one of those old marine DF receivers that use really long ferrite rods in the direction dials (Ray Jefferson made quite a few). Directivity has some advantages for DXing, but none that can't be had with a traditional loop.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3026. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 08:10:07 UTC
From: no@spam.com
Message-ID: <3EA79BDF.68C6@spam.com>
Source record: 35929

Jan Wagner wrote:

[...]

> About measuring: It's hard to say which equipment to trust - my
> really ancient 10MHz analog scope shows a nice and clean sine
> wave up to the freq the CRT is still readable, but OTOH, the much
> newer and in all aspects more reliable 100MHz digital
> scopemeter - with internal 20MHz lowpass filter toggled on -
> shows "wobbles" and glitches along the sine curve. I'll go lend
> another analog scope to triple check...
>
> In theory, the DDS output filters I use should have
> between -110dB to -100dB from 100 to 200MHz, IIRC. Maybe the
> "standard" small 0805 size chip inductors aren't suited? What
> type of filter components did you use?

[...]

> > I'll see if I get some spare time to try a demo board from AD
> using
> > 9850(?) and check the jitter. If so I will post the result for
> you to
> > compare.
>
> Yeah, would be interesting if you could post some numbers! :-)
>
> - Jan

Perhaps this might be useful as a reference point - I recently ran rms jitter measurements on some AD9835's with a 50MHz crystal clock using an HP5370A with time interval averaging and a Motorola 100EP16 ecl differential line receiver using hysteresis as a zero-cross detector.

The crystal had about 25ps rms jitter, and you could see the variation in the AD9835 output as the output frequency ratio changed from exact integer to non-integer. Above 1MHz, the rms jitter changed from about 60ps to roughly 300 ps.

Below 700KHz, the rms input noise of the EP16 starts to dominate, but I never saw the large amounts you posted.

Here is a log plot of the data:

http://www3.sympatico.ca/add.automation/misc/logplot.gif

Below is the raw data:

MHz RMS Jitter (ps)

5.0 55
4.9 253
4.8 171
4.7 157
4.6 156
4.5 184
4.4 128
4.3 112
4.2 111
4.1 195
4.0 129
3.9 186
3.8 198
3.7 138
3.6 134
3.5 142
3.4 179
3.3 209
3.2 154
3.1 201
3.0 148
2.9 195
2.8 227
2.7 175
2.6 242
2.5 58
2.4 227
2.3 199
2.2 181
2.1 261
2.0 74
1.9 252
1.8 357
1.7 188
1.6 334
1.5 249
1.4 344
1.3 322
1.25 139
1.2 355
1.1 321
1.0 148
0.9 344
0.8 357
0.7 378
0.6 531
0.5 441
0.4 547

0.3 1210
0.2 1320
0.1 2080
0.05 2870

From these results, I would hazard a guess there might be noise entering the system to give the results you are seeing, or there is something funny about the measurement. This is not much help, I know, but when you are dealing with wideband signals, the noise can come from anywhere.

Also, there might be noise on the power supply itself, especially if you are using a wall-wart. I posted an article on different ways to reduce it that might be helpful:

http://www3.sympatico.ca/add.automation/spice/ripple.htm

You might look at bypassing and grounding, parasitic oscllations, keeping lead lengths to a minimum, and all the other techniques needed for rf work at high frequency.

As far as getting 100dB attenuation from the DDS filter, that is difficult to do without extreme care in layout and shielding, especially above 100MHz.

Mike Monett

3027. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 09:53:05 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>
Source record: 35930

On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:

>Hmmmm. I'm not sure what you are trying to re-invent but the basic
>ferrite loop is in the range of 240uh/
>Its not an antenna per se,,,its the rf coil for the converter stage.
>You can play around with it however you choose but remember there were a
>Lots of skilled guys that arrived upon the best parameters.

A designer of a commercial product is limited by various constraints, such as the size limited by the receiver box or the manufacturing cost of the device. The designer has the find the best compromise while these restrictions apply.

However, in amateur experimentation, these constraints do not necessary apply and the other parameters can be optimised in different ways.

Some experimenters glued multiple loopsticks end to end to create a long loopstick (1 m), others made a bunch of multiple loopsticks and would the coil around the bunch. I don't know which is the most effective way.

Paul OH3LWR

3028. Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 10:14:06 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net>
Source record: 35931

Wanted: At least 6 crystals all on the same fequency
between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to build
experimental transmitters for the
160m band.
Does anyone have a batch of these gathering dust which
they no longer need and willing to part with?

Duncan G4DFV

3029. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 11:17:17 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <v%Ppa.272$Q72.63531@newsfep1-win.server.ntli.net>
Source record: 35932
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

> > > I don't know what this stuff I I have that is on this old roller
> > coaster
> > > unit. It could be Tufnol. It's brown, shiney outside, and it looks to
> > > have a laminated construction. Probably is Tufnol rather than
> > Paxoline.
> >
> > Actually they are both Bakelite. Lots of trade names for bakelite
> > (Phonelic Resins).
> >
> > http://www.sintetica.de/archive/body_archive.htm
> >
> > I think bakelite is okay for RF purposes. Especially certain grades,
> > "Kite Brand" perhaps.
> >
> > There ought to be and probably is a website that discusses relative
> > merits of materials for use in RF situations.
==========
Am I off the mark ,when saying that if any insulating material which does
not absorb water is put into a microwave oven and after exposure to
microwave radiation for x minutes has kept its ambient temperature , is a
suitable RF
insulator ?

Frank gm0csz.kn6wh@ntlworld.com

3030. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 12:31:00 UTC
From: ^2@vc.net
Message-ID: <^2-2404030531000001@207.178.185.199>
Source record: 35933

In article <b87ek9ste1@sparta.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> > ** 468/f seems to work ok.
> ========================
>
> You've been reading old-wives' tales again.
>
> Of course, with radio, any bloody thing will WORK.
>
> At least it might work good enough for YOU.
>
> But there have been 300 world-wide downloads of this program in the last 24
> hours which indicates 468/f does not work very well when it comes to very
> low Inverted-V's.

Quite true. According to my dipmeter, a 75m-band dipole, 2m above
ground, resonates about 8% lower than one at normal heights. I don't need
a computer to figure 8%. However, making a low dipole resonant does not
result in a low SWR since the radiation R at resonance is much less than
50-ohms.
>
> Within minutes of the program being available on the newsgroups there was an
> e-mail from a station wishing the program had been available a week earlier.
>
> He had just spent condiderable time and labour pruning in little bits the
> wire down to size after initially erecting a wire several feet longer than
> necessary just to be on the safe side.

the safe way is to fold the ends of the dipole back on themselves so
that the length can be adjusted longer or shorter as needed with out
soldering..
>
> He ended-up with the same antenna length as predicted by the program. Or
> rather the same resonant frequency as predicted by the program for his
> particular antenna dimensions.
>
> You have probably never had an Inverted-V, the poor man's high horizontal
> dipole.

Not a sound wager.

>Nevertheless your comment is not altogether out of place. Thanks.
> ---
ur welcome, Reg,

have phun

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3031. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 12:52:43 UTC
From: ^2@vc.net
Message-ID: <^2-2404030552430001@207.178.185.199>
Source record: 35934

In article <l26favs9mutn88npk380f022ie82a6rlk1@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> wrote:

> In <b87ponmhf1@slb9.atl.mindspring.net>, antispam <nospam@please.net> wrote:
>
> >Group gurus:
> >
> >What effect does the dimension of the ferrite core have on the ability
> >of a loopstick antenna to acquire a signal?
> >
> >Put another way, suppose I have one ferrite core, say 1/2 inch in
> >diameter and 4 inches long, and another the same diameter, but 8 inches
> >in length? Any differences in the electrical characteristics of
> > otherwise identical coils wound on each? Any differences in Q?
> >
> >How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
> >corrected so each coil has the same inductance) Any DX advantages to a
> >core of absurd dimensions (3 inches diameter, 3 feet in length?)
> >
> >TIA
>
> Theoretically, increasing the core diameter increases the number of lines of
> flux captured from the external field (just like increasing the diameter of a
> coil or antenna wire), and therefore increases its sensitivity, all else being
> the same. But any ferromagnetic material creates noise because of the
Barkhausen
> effect, which has already been determined to be the primary factor that limits
> the sensitivity of a ferrite rod antenna. IOW, a larger core will
increase your
> signal, but it will also proportionally increase the amount of noise. So
even if
> you do find an absurdly large core, your S/N ratio isn't going to
improve beyond
> the limit that has already been established with commercial radios.
>
> Increasing the length of the core will increase it's directivity, as you
can see
> if you ever get the chance to play with one of those old marine DF receivers
> that use really long ferrite rods in the direction dials (Ray Jefferson made
> quite a few). Directivity has some advantages for DXing, but none that
can't be
> had with a traditional loop.
>

&#65533; Good point. Increasing the length of the core also increases signal level. so less amplification is needed. I build 160m, 75m/40m direction finders with 3, 7'5" by 0.5" u=125 ferrite rods taped end to end, wound with hookup wire, and laid in 24" of Aluminum right-angle stock. I found the null to be surprisingly sharp and the resulting signal level could be amplified adequately with a simple untuned emitter-follower. Using this apparatus, I measured 75m and 40m signal arrival angles during day and night. The arrival angles were higher than is popularly believed. Also, near sunrise, arrival angles fluctuate widely.

cheerz

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3032. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 12:54:23 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3ea7de56$0$29716$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 35935

What do you mean by "effective"?
For better directivity (sharp nulls) a long stick is certainly doing better
than a short one.
Built one myself recently for this nice 80m ARDF RX:
http://members.aon.at/oe6gc/ARDF/ARDF80/body_ardf80.html

Markus, HB9BRJ

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com...
> Some experimenters glued multiple loopsticks end to end to create a
> long loopstick (1 m), others made a bunch of multiple loopsticks and
> would the coil around the bunch. I don't know which is the most
> effective way.

3033. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 12:55:08 UTC
From: ^2@vc.net
Message-ID: <^2-2404030555080001@207.178.185.199>
Source record: 35936

In article <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>, Paul Keinanen
<keinanen@sci.fi> wrote:

> On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:
>
>
> >Hmmmm. I'm not sure what you are trying to re-invent but the basic
> >ferrite loop is in the range of 240uh/
> >Its not an antenna per se,,,its the rf coil for the converter stage.
> >You can play around with it however you choose but remember there were a
> >Lots of skilled guys that arrived upon the best parameters.
>
> A designer of a commercial product is limited by various constraints,
> such as the size limited by the receiver box or the manufacturing cost
> of the device. The designer has the find the best compromise while
> these restrictions apply.
>
> However, in amateur experimentation, these constraints do not
> necessary apply and the other parameters can be optimised in different
> ways.
>
> Some experimenters glued multiple loopsticks end to end to create a
> long loopstick (1 m), others made a bunch of multiple loopsticks and
> would the coil around the bunch. I don't know which is the most
> effective way.
>
 I use tape and an aluminum channel to support the taped, end-to end rods.

cheers, Paul

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3034. Re: Plexiglass/Paxoline supplier in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 13:25:28 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <76pfav4eclqm5tlgoees89e7fggqv6ggic@4ax.com>
Source record: 35937
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Thu, 24 Apr 2003 12:17:17 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>Am I off the mark ,when saying that if any insulating material which does
>not absorb water is put into a microwave oven and after exposure to
>microwave radiation for x minutes has kept its ambient temperature , is a
>suitable RF
>insulator ?
>
A common test for plastics is to put a piece in a microwave with a cup
of water (you never want to run a microwave empty).

If the water gets hot but your test piece stays the same temp, then
that plastic does not absorb much RF at microwave frequencies. We
generalize this to believe that it absorbs little RF at frequencies of
interest.

Real RF testing is not a trivial process, this something easily
accessible.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3035. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 15:09:02 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>
Source record: 35938

On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:

|ï¿½ Quite true. According to my dipmeter, a 75m-band dipole, 2m above
|ground, resonates about 8% lower than one at normal heights. I don't need
|a computer to figure 8%. However, making a low dipole resonant does not
|result in a low SWR since the radiation R at resonance is much less than
|50-ohms.

Really? Can you offer supporting data? Is this antenna made from
nichrome wire?

3036. Watkins Johnson Radio Control Bus

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 16:08:24 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <3EA819E1.9030903@alltel.net>
Source record: 35939
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,sci.electronics.design

I have a WJ receiver for 20-1200Mc which has a nice 21.4MHz IF out.
Unfortunately, it's a 'panel less' receiver designed to work with
an old DEC LSI 11 based controller via this thing WJ calls a
Radio Control Bus. It would save me considerable work, if someone
could point me toward the bus specification.

Thanks,

-bob

3037. White Rose RX/TX..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 16:47:55 UTC
From: Adrian <adrian@ambquality.co.uk>
Message-ID: <VA.00003d2f.018be3f6@ambquality.co.uk>
Source record: 35940

Hi
Does anybody remember the White Rose rx, designed by John Hey ?
While sifting through some packing cases in the 'workshop' the other day I came across a set of part-completed circuit boards for one of these - and thought I might give it a try.

I have a copy of the original details (?Radcom?) - in which it stated that a matching Transmitter would be available soon. Does anybody know if this ever happened - and , if so, maybe has a set of details that they'd be willing to share ??

Thanks in advance
Adrian (G0THW)
Suffolk UK

3038. Re: Binocular balun cores in push-pull amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 16:48:59 UTC
From: wa5bdu@yahoo.com
Message-ID: <ca1a467b.0304240848.20951113@posting.google.com>
Source record: 35941

More about two-holers:

Does the formula L = A*n^2 work for inductors, even with half turns?

Since the two halves don't communicate with each other, you can just take the sum of the two inductances so,

L = A*[(N1)^2 + (N2)^2], where N1 and N2 are the number of turns through each hole.

N1 & N2 are equal for "integral turn" inductors and differ by 1 for "half turn" inductors. For a "half turn" version, the inductance will be

L = A*((N+1)^2 + N^2), which reduces to

L = 2A*(N^2 + N + 1/2)

Now, assume the same basic formula works when treating the entire inductor as a unit and allowing half turns. Now the efffective A is 2A. So consider the same inductor as above with the same number of turns, which now is N + 1/2 turns.

L = 2A*(N+1/2)^2 reducing to

L = 2A*(N^2 + N + 1/4)

The two resulting formulas are not equivalent. Close, but no cigar. Treating the whole thing as an inductor with half turns results in a calculation that is low by A/2 inductance units, regardless of the total number of turns.

Back to transformers. The transformer with a one turn primary and two turn secondary can be considered to be two such transformers, with their primaries and secondaries in series. That's pretty much academic regarding analysis except, getting back to my original question, what is the effect of this arrangement in a push-pull circuit where only one primary conductor is being driven at a time?

73--Nick/WA5BDU

3039. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 17:42:21 UTC
From: John Mortlock <heads@global.freeserve.co.uk>
Message-ID: <b898im$3gu$1@newsg3.svr.pol.co.uk>
Source record: 35943

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net...
> Wanted: At least 6 crystals all on the same fequency
> between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to build
> experimental transmitters for the
> 160m band.
> Does anyone have a batch of these gathering dust which
> they no longer need and willing to part with?
>
> Duncan G4DFV

http://www.surplussales.com/CrystalsList.html

John G3UGY

3040. Re: How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 17:45:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304240945.60db65ba@posting.google.com>
Source record: 35942

Bill Janssen <billj@ieee.org> wrote in message news:<3EA721DE.1521DFE3@ieee.org>...
> Tom Bruhns wrote:
...
>
> Also The length of the line should (I think) be short in relation to the line
> wavelength. Also the length will affect the coupling.
>
> Tom do you want to add more details regarding this.

Dang, Bill called my bluff. Before I try to explain any deeper, I
want to be very sure I have a clear understanding of the details
myself.

Here's a web site that has a fairly detailed analysis of coupled
microstrip: http://www.ee.bilkent.edu.tr/~microwave/programs/magnetic/dcoupler/theory.htm

If the math scares you, at least have a look down at the summary at
the end of section 1. It discusses length, among other things. There
is certainly not a need that the coupled section be very short...that
is, you don't have to think of it as a simple sampling of current
(magnetic field) and voltage (electric field) at a point, but it works
as a distributed system.

I had a look in the books I have at home last night, and didn't find
what I wanted there. But I did note that the old RSGB VHF/UHF manual
has a pretty good section on directional couplers, with both
construction articles and some general theory. Somewhere I have a
file folder of articles on various couplers; maybe it will yield
something.

I wonder if Kevin Schmidt still reads this group. I've found his
explanations of transmission line (and other) fields to be uniformly
excellent, and I've learned a lot from them.

More later if I learn enough to add something useful.

Cheers,
Tom

3041. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 18:36:11 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <nnagavk8qtbnd7rah46oiltdktlrfq75la@4ax.com>
Source record: 35944

In <^2-24040305524300001@207.178.185.199>, ^2@vc.net (ï¿½R.L. Measures) wrote:

>In article <l26favs9mutn88npk380f022ie82a6rlk1@4ax.com>, Frank Gilliland
><sparky@NOSPAMaimcomm.net> wrote:
>
>> In <b87ponmhf1@slb9.atl.mindspring.net>, antispam <nospam@please.net> wrote:
>>
>> >Group gurus:
>> >
>> >What effect does the dimension of the ferrite core have on the ability
>> >of a loopstick antenna to acquire a signal?
>> >
>> >Put another way, suppose I have one ferrite core, say 1/2 inch in
>> >diameter and 4 inches long, and another the same diameter, but 8 inches
>> >in length? Any differences in the electrical characteristics of
>> > otherwise identical coils wound on each? Any differences in Q?
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>> >How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
>> >corrected so each coil has the same inductance) Any DX advantages to a
>> >core of absurd dimensions (3 inches diameter, 3 feet in length?)
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>> >TIA
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>> Theoretically, increasing the core diameter increases the number of lines of
>> flux captured from the external field (just like increasing the diameter of a
>> coil or antenna wire), and therefore increases its sensitivity, all else being
>> the same. But any ferromagnetic material creates noise because of the
>Barkhausen
>> effect, which has already been determined to be the primary factor that limits
>> the sensitivity of a ferrite rod antenna. IOW, a larger core will
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>> signal, but it will also proportionally increase the amount of noise. So
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>> you do find an absurdly large core, your S/N ratio isn't going to
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>> the limit that has already been established with commercial radios.
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>> Increasing the length of the core will increase it's directivity, as you
>can see
>> if you ever get the chance to play with one of those old marine DF receivers
>> that use really long ferrite rods in the direction dials (Ray Jefferson made
>> quite a few). Directivity has some advantages for DXing, but none that
>can't be
>> had with a traditional loop.

>>
>ï¿½ Good point. Increasing the length of the core also increases signal
>level. so less amplification is needed. I build 160m, 75m/40m direction
>finders with 3, 7'5" by 0.5" u=125 ferrite rods taped end to end, wound
>with hookup wire, and laid in 24" of Aluminum right-angle stock. I found
>the null to be surprisingly sharp and the resulting signal level could be
>amplified adequately with a simple untuned emitter-follower. Using this
>apparatus, I measured 75m and 40m signal arrival angles during day and
>night. The arrival angles were higher than is popularly believed. Also,
>near sunrise, arrival angles fluctuate widely.
>
>cheerz

I messed around with DF rods a few years ago but I never found that length added much signal. I did notice that, like you said, the nulls are very sharp, and even seemed to be sharper than loops (subjective opinion).

The best preamp I found was a pair of triodes in cascode -- worked even better than an FET (go figure).

As for the arrival angles, are you sure you weren't phasing ground and skip?

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3042. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 18:38:49 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <fnbgavg0ab8sodpgu3q1j2omlhaniv4vqd@4ax.com>
Source record: 35945

In <^2-2404030555080001@207.178.185.199>, ^2@vc.net (ï¿½R.L. Measures) wrote:

>In article <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>, Paul Keinanen
><keinanen@sci.fi> wrote:
>
>> On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:
>>
>>
>> >Hmmmm. I'm not sure what you are trying to re-invent but the basic
>> >ferrite loop is in the range of 240uh/
>> >Its not an antenna per se,,,its the rf coil for the converter stage.
>> >You can play around with it however you choose but remember there were a
>> >Lots of skilled guys that arrived upon the best parameters.
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>> A designer of a commercial product is limited by various constraints,
>> such as the size limited by the receiver box or the manufacturing cost
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>> these restrictions apply.
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>> ways.
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>> Some experimenters glued multiple loopsticks end to end to create a
>> long loopstick (1 m), others made a bunch of multiple loopsticks and
>> would the coil around the bunch. I don't know which is the most
>> effective way.
>>
>ï¿½ I use tape and an aluminum channel to support the taped, end-to end rods.
>
>cheers, Paul

That gives me an interesting thought: ever try putting a Faraday shield around
the rod?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3043. Re: How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 18:43:20 UTC
From: mikea@mikea.ath.cx
Message-ID: <b89b88mhb10@puck.litech.org>
Source record: 35946

Tom Bruhns <k7itm@aol.com> wrote:

> Here's a web site that has a fairly detailed analysis of coupled
> microstrip:
http://www.ee.bilkent.edu.tr/~microwave/programs/magnetic/dcoupler/theory.htm

Very irritating pages, with lines that run off the edge of the paper
due to the construction of the HTML, but very enlightening.

--
It typically takes 25-30 gallons of petrol/diesel to fully-consume an
average-sized body under ideal conditions. That I am conversant with
this level of detail should serve as an indication of why the wise man
does not ask me questions about MS-Windows. --Tanuki the Raccoon-dog

3044. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 20:19:19 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <gFXpa.6816$b71.102889@news4.e.nsc.no>
Source record: 35811

Nice ARDF receiver, and nice documentation, the only thing I miss is how to make the PCB oneself. Is that available?

73,
Sverre

Sverre Holm, LA3ZA
www.qsl.net/la3za

"Markus L" <uo9oew@lnubb.pbz> wrote in message news:3ea7de56$0$29716$4d4ebb8e@read-nat.news.nl.uu.net...
> What do you mean by "effective"?
> For better directivity (sharp nulls) a long stick is certainly doing better
> than a short one.
> Built one myself recently for this nice 80m ARDF RX:
> http://members.aon.at/oe6gc/ARDF/ARDF80/body_ardf80.html
>
> Markus, HB9BRJ

3045. Re: bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-24 20:27:05 UTC
From: Robin <me@here.com>
Message-ID: <b89hjbdun1$830fa795@news.demon.co.uk>
Source record: 35812
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1050974199.440201@auth2.dns.griffin.net.uk...
> looking to buy 500w 60-125mhz element...anyone got a spare 1 for sale??
>
> simon g0zen
>
>

Mark at Telford Electronics has a selection for sale..
www.telfordelectronics.co.uk tell him that Robin from Tanzania sent you.. and ask for a discount..

3046. Re: bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 00:44:21 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1051231460.87466@auth2.dns.griffin.net.uk>
Source record: 35813
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

thanks will give them ago.....
"Robin" <me@here.com> wrote in message
news:b89hjbdun1$830fa795@news.demon.co.uk...
>
> "zindazenda" <zen@lineisp.co.uk> wrote in message
> news:1050974199.440201@auth2.dns.griffin.net.uk...
> > looking to buy 500w 60-125mhz element...anyone got a spare 1 for sale??
> >
> > simon g0zen
> >
> >
>
> Mark at Telford Electronics has a selection for sale..
> www.telfordelectronics.co.uk tell him that Robin from Tanzania sent you..
and ask for a
> discount..
>
>

3047. Re: ptfe coax supplier.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 00:46:23 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1051231581.568580@auth2.dns.griffin.net.uk>
Source record: 35814

thanks will do..also appears westlake in the uk stock similar..
"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0304031031.17edef93@posting.google.com...
> "zindazenda" <zen@lineisp.co.uk> wrote in message
news:<1049331953.369791@auth2.dns.griffin.net.uk>...
> > looking for supplier of small amounts of ptfe 50r (and 75r) coax...needs
to
> > be about 3.3mm dia..taking fairly large amounts of power..I have 5mm and
> > 1.8mm but i cant find 3.3mm anywhere.I know it is made as I have a very
> > small quantity, but not enough!!
> > have tried westlake in the uk and baren in holland..
>
> Are you wanting flexible or semirigid? I believe 3.58mm = 0.141" is a
> standard semirigid size. Thanks to an answer I got about my semirigid
> source question, I know that Down East Microwave has both flexible and
> semirigid, though I don't see any in exactly 3.3mm size. Have a peek
> at http://www.downeastmicrowave.com/DEMICAT.pdf, in the "Coaxial
> Cable, ..." section.
>
> Cheers,
> Tom

3048. Rotator Repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 01:33:35 UTC
From: dyess@txcyber.com
Message-ID: <b8a320$9eu$1@news.txcyber.com>
Source record: 35815

New Website for Antenna Rotator Repair: http://www.360hamrotatorservice.com/

3049. Re: help needed for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 02:00:56 UTC
From: fmmck@aol.com
Message-ID: <20030424220056.27031.00000038@mb-m24.aol.com>
Source record: 35816

<< I have to design a system which can send 2 MByte of data over the world. I want to use a Fritzel GPA30 vertical antenna for that which can receive data at 14/21/28 MHz. I found some-one in the Netherlands that has such a system and now I am searching for somebody in the world to send a 2 Mbyte of data. >>

Ben-

There are popular Amateur Radio systems that are capable of sending data over long distances. These are primarily teletype-like systems such as Amtor or Packet Radio.

One thing that characterizes them, is their extremely low data rate when used on frequencies that have around-the-world range. I understand that below 29 MHz in the U.S., the data rate is limited by law to 300 Baud, and to 1200 Baud between 29 and 29.7 MHz. The throughput rate is usually less because transmissions must sometimes be repeated many times to overcome noise and interference from other station's transmissions. Therefore, sending a large amount of data requires a large amount of time. In other words, you won't be able to view a QuickTime movie at full speed until all of the file has been received.

And it isn't simply a matter of law. You are not likely to find equipment capable of sending data on those frequencies at a much higher data rate.

You don't say how much of the system your design must include. You might simply specify use of Amateur Radio transceivers coupled with Packet modems and terminal software, at each end of the link. Such a system might be able to send the data over the 14, 21 or 28 Mhz bands, but only when conditions are right for the required path. On 14 MHz you might be able to send the data at some time during a 24 hour period. On 28 MHz, you might have to wait several days for conditions to be good enough to support sending the data, and just hope they stay good long enough to send it all.

An alternative might be to send data over a network of packet radio stations. The effective data rate would be even lower, but transmission over the network might be between numerous stations that are close enough together that they do not require any over-the-horizon paths. Some of the paths may even be via internet!

73, Fred, K4DII

3050. Re: Watkins Johnson Radio Control Bus

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 06:18:52 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <gr4qa.43610$cO3.3342647@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35817
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,sci.electronics.design

I've got an older WJ catalog.....what is the model number?

Pete

tongaloa <tongaloa@alltel.net> wrote in message
news:3EA819E1.9030903@alltel.net...
> I have a WJ receiver for 20-1200Mc which has a nice 21.4MHz IF out.
> Unfortunately, it's a 'panel less' receiver designed to work with
> an old DEC LSI 11 based controller via this thing WJ calls a
> Radio Control Bus. It would save me considerable work, if someone
> could point me toward the bus specification.
>
> Thanks,
>
> -bob
>

3051. Re: Watkins Johnson Radio Control Bus

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 06:26:04 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <0y4qa.43657$cO3.3343141@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35818
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,sci.electronics.design

Looking in my WJ catalog, there are a few receivers.....if it is either the 8654 or the 8607, these receivers use a couple of interface options; these are the HPIL and the RS-232 bus.

Pete

tongaloa <tongaloa@alltel.net> wrote in message news:3EA819E1.9030903@alltel.net...
> I have a WJ receiver for 20-1200Mc which has a nice 21.4MHz IF out.
> Unfortunately, it's a 'panel less' receiver designed to work with
> an old DEC LSI 11 based controller via this thing WJ calls a
> Radio Control Bus. It would save me considerable work, if someone
> could point me toward the bus specification.
>
> Thanks,
>
> -bob
>

3052. Re: bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 07:31:22 UTC
From: Neil <neil@uk.nospam.com>
Message-ID: <b8ao84$9to$1@rdel.co.uk>
Source record: 35819
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I have a 1Kw 144-520 Mhz Factor=10 element if you are interested.
If it is of use then make me an offer.
Cheers
>

3053. Re: White Rose RX/TX..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 07:59:51 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b8aptmsig1@sparta.btinternet.com>
Source record: 35820

"Adrian" <adrian@ambquality.co.uk> wrote in message
news:VA.00003d2f.018be3f6@ambquality.co.uk...
> Hi
> Does anybody remember the White Rose rx, designed by John Hey ?
> While sifting through some packing cases in the 'workshop' the other
> day I came across a set of part-completed circuit boards for one of
> these - and thought I might give it a try.
>
> I have a copy of the original details (?Radcom?) - in which it stated
> that a matching Transmitter would be available soon. Does anybody know
> if this ever happened - and , if so, maybe has a set of details that
> they'd be willing to share ??

I remember the Rx article although I don't recall RadCom ever publishing a
companion Tx. Perhaps John designed one, though, and didn't write it up. I
think that 'White Rose' referred to a club - in Lancashire? They might have
a web site, or you could get their details from the RSGB and contact them.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3054. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 09:21:40 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3ea8fdfc$0$29730$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 35821

Mail the author OE6GC for the PCB layout in PostScript or PDF format.
He sent me a 1:1 film which I could lend out. Mail me if interested.

73, Markus HB9BRJ

(mail address rot13 encoded. Decode before replying)

"Sverre Holm (LA3ZA)" <0junk4me@qsl.net> wrote in message
news:gFXpa.6816$b71.102889@news4.e.nsc.no...
> Nice ARDF receiver, and nice documentation, the only thing I miss is how
to
> make the PCB oneself. Is that available?
>
> 73,
> Sverre
>
> ---------------------------------
> Sverre Holm, LA3ZA
> www.qsl.net/la3za
>
> "Markus L" <uo9oew@lnubb.pbz> wrote in message
> news:3ea7de56$0$29716$4d4ebb8e@read-nat.news.nl.uu.net...
> > What do you mean by "effective"?
> > For better directivity (sharp nulls) a long stick is certainly doing
> better
> > than a short one.
> > Built one myself recently for this nice 80m ARDF RX:
> > http://members.aon.at/oe6gc/ARDF/ARDF80/body_ardf80.html
> >
> > Markus, HB9BRJ
>
>
>

3055. An active loop (indoor) for BCL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 10:57:34 UTC
From: Ale55andro <DearSpammerTakeThisNowww@tim.it>
Message-ID: <b15iavgst17aik5v62inhonhposof28sq2@4ax.com>
Source record: 35822

Where I can find a schematic to build an
active loop (indoor) for BCL.
I already own the pre-amplifier (a broad-band
0-30 MHz homemade that of course needs a LC
tune circuit).
Thanks in advance.

3056. Re: An active loop (indoor) for BCL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 11:21:19 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <f46iavkspr8tm9iqc7ji5ievad9ls1al0u@4ax.com>
Source record: 35823

In <b15iavgst17aik5v62inhonhposof28sq2@4ax.com>, Ale55andro
<DearSpammerTakeThisNowww@tim.it> wrote:

>Where I can find a schematic to build an
>active loop (indoor) for BCL.
>I already own the pre-amplifier (a broad-band
>0-30 MHz homemade that of course needs a LC
>tune circuit).
>Thanks in advance.

If you already have the preamp, just add a loop. If you want a tuned loop, try
this:

http://www.aimcomm.com/sparky/rad03.txt

If you want to get really radical, try some research on negative impedance
converters.

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3057. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 12:26:09 UTC
From: ^2@vc.net
Message-ID: <^2-2504030526090001@207.178.185.199>
Source record: 35824

In article <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (�R.L. Measures) wrote:
>
>
> |� Quite true. According to my dipmeter, a 75m-band dipole, 2m above
> |ground, resonates about 8% lower than one at normal heights. I don't need
> |a computer to figure 8%. However, making a low dipole resonant does not
> |result in a low SWR since the radiation R at resonance is much less than
> |50-ohms.
>
>
> Really? Can you offer supporting data?

� I measured the resonant-frequency with a Kenwood dip-meter.

>Is this antenna made from
> nichrome wire?

� sour grapes. I hear that Mr. Rauch is no longer with MFJ/Ameritron.
cheers, Wes.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3058. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 12:32:32 UTC
From: ^2@vc.net
Message-ID: <^2-2504030532320001@207.178.185.199>
Source record: 35825

In article <nnagavk8qtbnd7rah46oiltdktlrfq75la@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> wrote:

> In <^2-2404030552430001@207.178.185.199>, ^2@vc.net (R.L. Measures) wrote:
>
> >In article <l26favs9mutn88npk380f022ie82a6rlk1@4ax.com>, Frank Gilliland
> ><sparky@NOSPAMaimcomm.net> wrote:
> >
> >> In <b87ponmhf1@slb9.atl.mindspring.net>, antispam
<nospam@please.net> wrote:
> >>
> >> >Group gurus:
> >> >
> >> >What effect does the dimension of the ferrite core have on the ability
> >> >of a loopstick antenna to acquire a signal?
> >> >
> >> >Put another way, suppose I have one ferrite core, say 1/2 inch in
> >> >diameter and 4 inches long, and another the same diameter, but 8 inches
> >> >in length? Any differences in the electrical characteristics of
> >> > otherwise identical coils wound on each? Any differences in Q?
> >> >
> >> >How about a 1/2 inch core versus a 1 inch core? (Assuming #turns are
> >> >corrected so each coil has the same inductance) Any DX advantages to a
> >> >core of absurd dimensions (3 inches diameter, 3 feet in length?)
> >> >
> >> >TIA
> >>
> >> Theoretically, increasing the core diameter increases the number of
lines of
> >> flux captured from the external field (just like increasing the
diameter of a
> >> coil or antenna wire), and therefore increases its sensitivity, all
else being
> >> the same. But any ferromagnetic material creates noise because of the
> >Barkhausen
> >> effect, which has already been determined to be the primary factor
that limits
> >> the sensitivity of a ferrite rod antenna. IOW, a larger core will
> >increase your
> >> signal, but it will also proportionally increase the amount of noise. So
> >even if
> >> you do find an absurdly large core, your S/N ratio isn't going to
> >improve beyond

> >> the limit that has already been established with commercial radios.
> >>
> >> Increasing the length of the core will increase it's directivity, as you
> >can see
> >> if you ever get the chance to play with one of those old marine DF
receivers
> >> that use really long ferrite rods in the direction dials (Ray
Jefferson made
> >> quite a few). Directivity has some advantages for DXing, but none that
> >can't be
> >> had with a traditional loop.
> >>
> >> Good point. Increasing the length of the core also increases signal
> >level. so less amplification is needed. I build 160m, 75m/40m direction
> >finders with 3, 7'5" by 0.5" u=125 ferrite rods taped end to end, wound
> >with hookup wire, and laid in 24" of Aluminum right-angle stock. I found
> >the null to be surprisingly sharp and the resulting signal level could be
> >amplified adequately with a simple untuned emitter-follower. Using this
> >apparatus, I measured 75m and 40m signal arrival angles during day and
> >night. The arrival angles were higher than is popularly believed. Also,
> >near sunrise, arrival angles fluctuate widely.
> >
> >cheerz
>
> I messed around with DF rods a few years ago but I never found that
length added
> much signal. I did notice that, like you said, the nulls are very sharp, and
> even seemed to be sharper than loops (subjective opinion).
>
> The best preamp I found was a pair of triodes in cascode -- worked even better
> than an FET (go figure).
>
 beats me

> As for the arrival angles, are you sure you weren't phasing ground and skip?
>
 doubtful since height above the lossy ground did not seem to effect the
observed angle.

cheers
>
>
>
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3059. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 12:34:11 UTC
From: ^2@vc.net
Message-ID: <^2-2504030534110001@207.178.185.199>
Source record: 35826

In article <fnbgavg0ab8sodpgu3q1j2omlhaniv4vqd@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> wrote:

> In <^2-2404030555080001@207.178.185.199>, ^2@vc.net (R.L. Measures) wrote:
>
> >In article <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>, Paul Keinanen
> ><keinanen@sci.fi> wrote:
> >
> >> On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:
> >>
> >>
> >> >Hmmmm. I'm not sure what you are trying to re-invent but the basic
> >> >ferrite loop is in the range of 240uh/
> >> >Its not an antenna per se,,,its the rf coil for the converter stage.
> >> >You can play around with it however you choose but remember there were a
> >> >Lots of skilled guys that arrived upon the best parameters.
> >>
> >> A designer of a commercial product is limited by various constraints,
> >> such as the size limited by the receiver box or the manufacturing cost
> >> of the device. The designer has the find the best compromise while
> >> these restrictions apply.
> >>
> >> However, in amateur experimentation, these constraints do not
> >> necessary apply and the other parameters can be optimised in different
> >> ways.
> >>
> >> Some experimenters glued multiple loopsticks end to end to create a
> >> long loopstick (1 m), others made a bunch of multiple loopsticks and
> >> would the coil around the bunch. I don't know which is the most
> >> effective way.
> >>
> >> I use tape and an aluminum channel to support the taped, end-to end
rods.
> >
> >cheers, Paul
>
> That gives me an interesting thought: ever try putting a Faraday shield around
> the rod?
>
 the aluminum channel served as a Faraday shield.
>
>
>

>
>
>
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--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3060. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 13:33:45 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <YTaqa.1309$z96.333680@newsfep2-win.server.ntli.net>
Source record: 35827

> > That gives me an interesting thought: ever try putting a Faraday shield around
> > the rod?
> >
> ? the aluminum channel served as a Faraday shield.
==========
FYI ,some time ago I made a DF rx for 160 m with a ferrite stick antenna from an old valve type BC rx.

The ferrite stick antenna was fitted inside a circular aluminium pipe cut such that there is a 2mm slit over its entire length.
The ferrite rod was subsequently fitted concentrically with polystyrene discs at each pipe end.

If necessary the antenna can be waterproofed by covering the slit with tape.

Frank gm0csz.kn6wh@ntlworld.com

3061. Re: An active loop (indoor) for BCL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 13:41:56 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3ea93adf$0$133$edfadb0f@dtext02.news.tele.dk>
Source record: 35828

Hello

> Where I can find a schematic to build an
> active loop (indoor) for BCL.
> I already own the pre-amplifier (a broad-band
> 0-30 MHz homemade that of course needs a LC
> tune circuit).

There is so many of them out there, so it might be a
good idea if you did supply some more info.

What freq. range is of intrest ?

The size of it ?

Outdoor or indoor ?

Remotely tuned or not ?

Do you prefer special mechanical type of design ?

Regards Max

3062. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 14:06:59 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <lreiavsnplbo2lq4qm51vo4rhkqefpti5c@4ax.com>
Source record: 35829

On Fri, 25 Apr 2003 05:26:09 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:

|In article <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>, Wes Stewart
|<n7ws@#arrl.net> wrote:
|
|> On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:
|>
|>
|> |ï¿½ Quite true. According to my dipmeter, a 75m-band dipole, 2m above
|> |ground, resonates about 8% lower than one at normal heights. I don't need
|> |a computer to figure 8%. However, making a low dipole resonant does not
|> |result in a low SWR since the radiation R at resonance is much less than
|> |50-ohms.
|>
|>
|> Really? Can you offer supporting data?
|
|ï¿½ I measured the resonant-frequency with a Kenwood dip-meter.

In other words, you CANNOT offer supporting data.

3063. Re: bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 18:39:11 UTC
From: dmu_pkearn_dmu@rondomondo.eircom.ru.tv.net
Message-ID: <3ea980ab.680730@news1.eircom.net>
Source record: 35830
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Fri, 25 Apr 2003 08:31:22 +0100, "Neil" <neil@uk.nospam.com> wrote:

>I have a 1Kw 144-520 Mhz Factor=10 element if you are interested.

wow!...
do these elements have a price tag proportional to the power handling?

3064. Re: White Rose RX/TX..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 19:30:26 UTC
From: Adrian <adrian@ambquality.co.uk>
Message-ID: <VA.00003d30.02359c77@ambquality.co.uk>
Source record: 35831

HI Leon

Thanks for the reply.

I don't remember Radcom publishing the TX either <g> - but I did see a reference on the web to the transmitter, and it was certainly mentioned in the original article.

There is a website for the White Rose Radio Club - I emailed them some days ago and I'm still waiting for a reply <g>

I've also found John's snail-mail address on the web - so if all else fails I could write him a letter.....

Thanks again
Adrian G0THW
Suffolk UK

3065. Re: How to design a directive coupler for SWR-meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 20:06:56 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304251206.1a89b2fa@posting.google.com>
Source record: 35832

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0304240945.60db65ba@posting.google.com>...
...
> More later if I learn enough to add something useful.

(Yeah, Mike's sure right about the terribly annoying formatting on
that web page.)

I put together a model of two coupled lines. The model is
conceptually simple, just L-C sections in Spice. Each line in each
section is 1e-13 farads shunt and 2.5e-10 henries series, or about 1.5
millimeters of line length, for air-dielectric line. The coupling was
1.01e-15 farads and k=0.01, which I expected would give a -40dB
coupling. I used 104 segments like this, in series, to represent the
coupler. That's about .1559 meters of line, which is a quarter wave
at 480.7MHz. The model shows -40.00 dB of coupling at 480MHz, and the
same coupling at 1.44GHz, which corresponds to 3/4 wavelength.
Presumably that continues at odd quarter waves. That means...if you
are willing to make a coupled line that long...that if you use a 1/4
wave coupled section at 146MHz, you will get the same coupling at
438MHz. The "directionality" from the model was 40dB at the 1/4 wave
frequency and 33dB at 3/4 wave. That is, the response to the port
that is supposed to be quiet was 40 and 33dB lower than the response
to the coupled port. And that's probably an artifact of the segmented
model. (An actual implementation will have other defects limiting the
directionality, I'm sure.)

At lower frequencies, the coupling drops off, following a 20dB/decade
asymptote. Coupling at 4.8MHz in the model is -76.1dB. And at 1/2
wave (960MHz), there is a deep null in the coupling. The coupling at
480MHz +/- stays within 0.01dB of -40.01dB from about 458MHz to 499MHz
(slightly non-symmetrical about the peak response). The 3/4-wave
response is similarly flat from 1.414GHz to 1.456GHz. That's
certainly dead-flat for any amateur application, and if you scale the
freqs listed above, you can cover 141.5-154.2 and 437-450 with a
single coupler with equal, flat coupling on the two bands. Only
problem is that the coupler has to be 50 cm long, if it's
air-dielectric. Perhaps a more practical 33cm (13 inches) if we can
do it with polyethylene dielectric...

Anybody think this would be worthy of a construction article if I can
figure out how to make it practical?

(Don't read too much into the absolute numbers from the model. With
so many segments, and especially at low freqs where the reactances are
quite small, we should expect some roundoff error. I'd guess the

20dB/decade is accurate, and I'd guess that the "real" asymptote may well pass through a point 3dB above the -40dB coupling peak, which would imply -77dB at 4.8MHz.)

Math/fields whizzes can undoubtedly confirm or refute all this Spice modelling easily with an analytic model. :-)

Cheers,
Tom

3066. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 23:37:40 UTC
From: ^2@vc.net
Message-ID: <^2-2504031637400001@207.178.185.100>
Source record: 35833

In article <lreiavsnplbo2lq4qm51vo4rhkqefpti5c@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Fri, 25 Apr 2003 05:26:09 -0700, ^2@vc.net (R.L. Measures) wrote:
>
> |In article <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>, Wes Stewart
> |<n7ws@#arrl.net> wrote:
> |
> |> On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (R.L. Measures) wrote:
> |>
> |>
> |> |R Quite true. According to my dipmeter, a 75m-band dipole, 2m above
> |> |ground, resonates about 8% lower than one at normal heights. I don't need
> |> |a computer to figure 8%. However, making a low dipole resonant does not
> |> |result in a low SWR since the radiation R at resonance is much less than
> |> |50-ohms.
> |>
> |>
> |> Really? Can you offer supporting data?
> |
> |R I measured the resonant-frequency with a Kenwood dip-meter.
>
> In other words, you CANNOT offer supporting data.

R There was a supporting wood post at each end of the wire. I stood at
the middle of the dipole with a dipmeter and measured the resonant
frequency. Presumably, the resonance lowering effect was brought about by
the additional capacitive loading at the ends caused by being closer to
ground.

cheers, Wes.

--
Rich, 805-386-3734, www.vcnet.com/measures, remove ^ from adr.

3067. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-25 23:39:12 UTC
From: ^2@vc.net
Message-ID: <^2-2504031639120001@207.178.185.100>
Source record: 35834

In article <YTaqa.1309$z96.333680@newsfep2-win.server.ntli.net>, "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote:

> > > That gives me an interesting thought: ever try putting a Faraday shield
> around
> > > the rod?
> > >
> > ? the aluminum channel served as a Faraday shield.
> ==========
> FYI ,some time ago I made a DF rx for 160 m with a ferrite stick antenna
> from an old valve type BC rx.
>
> The ferrite stick antenna was fitted inside a circular aluminium pipe cut
> such that there is a 2mm slit over its entire length.
> The ferrite rod was subsequently fitted concentrically with polystyrene
> discs at each pipe end.
>
> If necessary the antenna can be waterproofed by covering the slit with tape.
>
 sounds good, Frank

--
Rich, 805-386-3734, www.vcnet.com/measures, remove ^ from adr.

3068. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 01:34:11 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ohnjavoe0klbgfcspa73ommk97s2m17l72@4ax.com>
Source record: 35835

On Fri, 25 Apr 2003 16:37:40 -0700, ^2@vc.net (ï¿½ R. L. Measures)
wrote:

|In article <lreiavsnplbo2lq4qm51vo4rhkqefpti5c@4ax.com>, Wes Stewart
|<n7ws@#arrl.net> wrote:
|
|> On Fri, 25 Apr 2003 05:26:09 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:
|>
|> |In article <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>, Wes Stewart
|> |<n7ws@#arrl.net> wrote:
|> |
|> |> On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:
|> |>
|> |>
|> |> |ï¿½ Quite true. According to my dipmeter, a 75m-band dipole, 2m above
|> |> |ground, resonates about 8% lower than one at normal heights. I don't need
|> |> |a computer to figure 8%. However, making a low dipole resonant does not
|> |> |result in a low SWR since the radiation R at resonance is much less than
|> |> |50-ohms.
|> |>
|> |>
|> |> Really? Can you offer supporting data?
|> |
|> |ï¿½ I measured the resonant-frequency with a Kenwood dip-meter.
|>
|> In other words, you CANNOT offer supporting data.
|
|ï¿½ There was a supporting wood post at each end of the wire. I stood at
|the middle of the dipole with a dipmeter and measured the resonant
|frequency. Presumably, the resonance lowering effect was brought about by
|the additional capacitive loading at the ends caused by being closer to
|ground.

But you said that there was an 8% change going from "normal" height
(which is???) down to 2 meters high. So if "normal" is 15 to 20
meters, I guess you stood on a 15 - 20 meter high post and grid dipped
there too. Right?

I modeled a 75 meter dipole at heights of 20 and 2 meters and found
about 1% change.

Also, don't you know---ooops of course you don't---that the impedance
of a 2 meter high, 75 meter dipole over average ground, has an
impedance *greater* than 50 ohm (~60), not lower. So your other
unsubstantiated old wives' claim is untrue also.

A few minutes with even the free version of EZNEC would serve you
well.

3069. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 03:53:47 UTC
From: novatech@eskimo.com
Message-ID: <b8cvsb$5lq$1@eskinews.eskimo.com>
Source record: 35836

"Jan Wagner" <jwagner@cc.hut.fi> writes:

>In theory, the DDS output filters I use should have
>between -110dB to -100dB from 100 to 200MHz, IIRC. Maybe the
>"standard" small 0805 size chip inductors aren't suited? What
>type of filter components did you use?

You have to choose these inductors carefully. I have tested half a dozen
different brands and discarded most of them. Coilcraft ones are pretty
good, but none of the brand Digi-Key carries are useful with this device.
If you use an eliptical filter, your Q at the passband edge has be high.
Use this cheesy little program to calculate Elip filters.
(http://novatech-instr.com/Software/TOOLS/ELIP.C) There are better programs
around, but this one gives the right answers.

>Another alternative is that the filter is too steep, and the
>"wobbles" are transfer function <=> inverse Fourier => time
>domain sinc(x) function convolution with the input signal (sounds
>like dead wrong maths, but _maybe_...)

Well, you can get ringing due to the fact that the sine wave is a
step-wise approximation. This little steps "whack" your filter to
generate "wobble".

>> I'll see if I get some spare time to try a demo board from AD
>using
>> 9850(?) and check the jitter. If so I will post the result for
>you to
>> compare.

Remember that no matter how good your filter is, there are code
dependent spurs at 60-70dBc down on this device and can also show up
in your output. Your bypassing and board layout has to be really
good. Also, the PLL pin is EXTREMELY sensitive to pick up. A PC monitor,
5-10 feet away will modulate your output. A phase noise plot makes this
easy to find. Put your UUT in a metal box for testing.

>Yeah, would be interesting if you could post some numbers! :-)

You should see about 25ps RMS, or about 200ps P-P.

> - Jan

Steve.

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997

206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

3070. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 05:35:19 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <906kav07m785t115dvdlnh3nc61tmklbqk@4ax.com>
Source record: 35837

In <^2-25040305341100001@207.178.185.199>, ^2@vc.net (ï¿½R.L. Measures) wrote:

>In article <fnbgavg0ab8sodpgu3q1j2omlhaniv4vqd@4ax.com>, Frank Gilliland
><sparky@NOSPAMaimcomm.net> wrote:
>
>> In <^2-24040305550800001@207.178.185.199>, ^2@vc.net (ï¿½R.L. Measures) wrote:
>>
>> >In article <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>, Paul Keinanen
>> ><keinanen@sci.fi> wrote:
>> >
>> >> On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:
>> >>
>> >>
>> >> >Hmmmm. I'm not sure what you are trying to re-invent but the basic
>> >> >ferrite loop is in the range of 240uh/
>> >> >Its not an antenna per se,,,its the rf coil for the converter stage.
>> >> >You can play around with it however you choose but remember there were a
>> >> >Lots of skilled guys that arrived upon the best parameters.
>> >>
>> >> A designer of a commercial product is limited by various constraints,
>> >> such as the size limited by the receiver box or the manufacturing cost
>> >> of the device. The designer has the find the best compromise while
>> >> these restrictions apply.
>> >>
>> >> However, in amateur experimentation, these constraints do not
>> >> necessary apply and the other parameters can be optimised in different
>> >> ways.
>> >>
>> >> Some experimenters glued multiple loopsticks end to end to create a
>> >> long loopstick (1 m), others made a bunch of multiple loopsticks and
>> >> would the coil around the bunch. I don't know which is the most
>> >> effective way.
>> >>
>> >ï¿½ I use tape and an aluminum channel to support the taped, end-to end
>rods.
>> >
>> >cheers, Paul
>>
>> That gives me an interesting thought: ever try putting a Faraday shield around
>> the rod?
>>
>ï¿½ the aluminum channel served as a Faraday shield.

My first thought is that if the aluminum channel is solid (already assuming it's
tubular, but 'solid' meaning not perforated or cut with slits), wouldn't eddy

currents in the shield detune the coil and/or attenuate the signal? Or was this stick for VLF?

Either way, my idea was more along the lines of wrapping it up in some ribbon cable tied together at one end.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3071. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 05:36:47 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <1m6kavoamgj2ov2mrs3d0cgr921eij5fhh@4ax.com>
Source record: 35838

In <^2-25040305323200001@207.178.185.199>, ^2@vc.net (ï¿½R.L. Measures) wrote:

<snip>
>> As for the arrival angles, are you sure you weren't phasing ground and skip?
>>
>ï¿½ doubtful since height above the lossy ground did not seem to effect the
>observed angle.

Interesting. I gotta play with that myself.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3072. Re: help needed for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 09:32:45 UTC
From: Ben Veen <ben_veen@Hotmail.com>
Message-ID: <b8djne$jo8$1@news.tudelft.nl>
Source record: 35839

thank you very much, I will look intoi the info you gave me and I will get back to you then.

ben

"Fred McKenzie" <fmmck@aol.com> schreef in bericht news:20030424220056.27031.00000038@mb-m24.aol.com...
> << I have to design a system which can send 2 MByte of data over the world. I
> want to use a Fritzel GPA30 vertical antenna for that which can receive data
> at 14/21/28 MHz. I found some-one in the Netherlands that has such a system
> and now I am searching for somebody in the world to send a 2 Mbyte of data. >>
>
> Ben-
>
> There are popular Amateur Radio systems that are capable of sending data over
> long distances. These are primarily teletype-like systems such as Amtor or
> Packet Radio.
>
> One thing that characterizes them, is their extremely low data rate when used
> on frequencies that have around-the-world range. I understand that below 29
> MHz in the U.S., the data rate is limited by law to 300 Baud, and to 1200 Baud
> between 29 and 29.7 MHz. The throughput rate is usually less because
> transmissions must sometimes be repeated many times to overcome noise and
> interference from other station's transmissions. Therefore, sending a large
> amount of data requires a large amount of time. In other words, you won't be
> able to view a QuickTime movie at full speed until all of the file has been
> received.
>
> And it isn't simply a matter of law. You are not likely to find equipment
> capable of sending data on those frequencies at a much higher data rate.
>
> You don't say how much of the system your design must include. You might
> simply specify use of Amateur Radio transceivers coupled with Packet

modems and
> terminal software, at each end of the link. Such a system might be able
to
> send the data over the 14, 21 or 28 Mhz bands, but only when conditions
are
> right for the required path. On 14 MHz you might be able to send the data
at
> some time during a 24 hour period. On 28 MHz, you might have to wait
several
> days for conditions to be good enough to support sending the data, and
just
> hope they stay good long enough to send it all.
>
> An alternative might be to send data over a network of packet radio
stations.
> The effective data rate would be even lower, but transmission over the
network
> might be between numerous stations that are close enough together that
they do
> not require any over-the-horizon paths. Some of the paths may even be via
> internet!
>
> 73, Fred, K4DII
>

3073. DVR 2-2 users:

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 15:41:31 UTC
From: Stuart Blake Tener <stuart@misty.com>
Message-ID: <b8e9c1$jq2$1@news.misty.com>
Source record: 35840
Cross-posted to: rec.radio.amateur.misc,rec.ham-radio.packet,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

DVR 2-2 users:

I have a DVR 2-2, and I lost the power cable for it. I need to know what is the type of connector on the back of the DVR 2-2, and where can I purchase a plug that mates with it that I can use to build a power cable for it!

Stuart
N3GWG
Beverly Hills, CA

3074. Panel 2.0 / Dial for Linux 2.0

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 16:44:23 UTC
From: wb8rcr <wb8rcr_nospam@qsl.net>
Message-ID: <valdsrsl1bgi36@corp.supernews.com>
Source record: 35841

A few weeks ago, I announced the release of an updated version of Dial for Windows which allows a control to be rotated.

That same capability has now been added to the platform independent/Linux versions of Dial and Panel. Both are now available at http://hfradio.org/wb8rcr. On the left, click on "Panel (not QSLMaker)" to get to the Dial/Panel download page.

These are all free, open source, no strings.

Enjoy.

didleydadidah

3075. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-26 20:04:12 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3EAAE63C.2E387CBD@clifto.com>
Source record: 35842

antispam wrote:
> What effect does the dimension of the ferrite core have on the ability
> of a loopstick antenna to acquire a signal?

There's some decent information at
<http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html>.

--
"Since I was a small boy, two states have been added to our country, and
two words have been added to the Pledge of Allegiance: Under God.
Wouldn't it be a pity if someone said that is a prayer, and that would be
eliminated from schools, too?" -- Red Skelton, 1969

3076. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 02:25:02 UTC
From: ^2@vc.net
Message-ID: <^2-2604031925020001@207.178.185.199>
Source record: 35843

In article <ohnjavoe0klbgfcspa73ommk97s2m17l72@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Fri, 25 Apr 2003 16:37:40 -0700, ^2@vc.net (• R. L. Measures)
> wrote:
>
> |In article <lreiavsnplbo2lq4qm51vo4rhkqefpti5c@4ax.com>, Wes Stewart
> |<n7ws@#arrl.net> wrote:
> |
> |> On Fri, 25 Apr 2003 05:26:09 -0700, ^2@vc.net (•R.L. Measures) wrote:
> |>
> |> |In article <8ltfavsng0iid09o09qpi31bik8eojt48j@4ax.com>, Wes Stewart
> |> |<n7ws@#arrl.net> wrote:
> |> |
> |> |> On Thu, 24 Apr 2003 05:31:00 -0700, ^2@vc.net (•R.L. Measures) wrote:
> |> |>
> |> |>
> |> |> |• Quite true. According to my dipmeter, a 75m-band dipole, 2m above
> |> |> |ground, resonates about 8% lower than one at normal heights. I
don't need
> |> |> |a computer to figure 8%. However, making a low dipole resonant
does not
> |> |> |result in a low SWR since the radiation R at resonance is much
less than
> |> |> |50-ohms.
> |> |>
> |> |>
> |> |> Really? Can you offer supporting data?
> |> |
> |> |• I measured the resonant-frequency with a Kenwood dip-meter.
> |>
> |> In other words, you CANNOT offer supporting data.
> |
> |• There was a supporting wood post at each end of the wire. I stood at
> |the middle of the dipole with a dipmeter and measured the resonant
> |frequency. Presumably, the resonance lowering effect was brought about by
> |the additional capacitive loading at the ends caused by being closer to
> |ground.
>
> But you said that there was an 8% change going from "normal" height
> (which is???) down to 2 meters high. So if "normal" is 15 to 20
> meters, I guess you stood on a 15 - 20 meter high post and grid dipped
> there too. Right?

>
&#65533; I compared my measurement at h=2-meters to 468/f.

> I modeled a 75 meter dipole at heights of 20 and 2 meters and found
> about 1% change.
>
> Also, don't you know---ooops of course you don't---that the impedance
> of a 2 meter high, 75 meter dipole over average ground, has an
> impedance *greater* than 50 ohm (~60), not lower.

&#65533; As I recall, according to the literature, radiation R is max at a
half-wave and decreases as height above ground decreases.

>So your other
> unsubstantiated old wives' claim is untrue also.
>
&#65533; R did not matter since I was trying to find the length a counterpoise
for a 0.33 wave length vertical 2-m aove ground.

> A few minutes with even the free version of EZNEC would serve you
> well.

&#65533; I prefer hands-on measurements.

cheers, Wes.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3077. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 02:36:59 UTC
From: ^2@vc.net
Message-ID: <^2-2604031936590001@207.178.185.199>
Source record: 35844

In article <906kav07m785t115dvdlnh3nc61tmklbqk@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> wrote:

> In <^2-2504030534110001@207.178.185.199>, ^2@vc.net (R.L. Measures) wrote:
>
> >In article <fnbgavg0ab8sodpgu3q1j2omlhaniv4vqd@4ax.com>, Frank Gilliland
> ><sparky@NOSPAMaimcomm.net> wrote:
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> >> In <^2-2404030555080001@207.178.185.199>, ^2@vc.net (R.L. Measures) wrote:
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> >> >In article <g36fav4jubpe5mc8k78vshrsg49gkv4m7p@4ax.com>, Paul Keinanen
> >> ><keinanen@sci.fi> wrote:
> >> >
> >> >> On Thu, 24 Apr 2003 01:34:28 -0400, --Bill M-- <no.@mo-.spam> wrote:
> >> >>
> >> >>
> >> >> >Hmmmm. I'm not sure what you are trying to re-invent but the basic
> >> >> >ferrite loop is in the range of 240uh/
> >> >> >Its not an antenna per se,,,its the rf coil for the converter stage.
> >> >> >You can play around with it however you choose but remember there
were a
> >> >> >Lots of skilled guys that arrived upon the best parameters.
> >> >>
> >> >> A designer of a commercial product is limited by various constraints,
> >> >> such as the size limited by the receiver box or the manufacturing cost
> >> >> of the device. The designer has the find the best compromise while
> >> >> these restrictions apply.
> >> >>
> >> >> However, in amateur experimentation, these constraints do not
> >> >> necessary apply and the other parameters can be optimised in different
> >> >> ways.
> >> >>
> >> >> Some experimenters glued multiple loopsticks end to end to create a
> >> >> long loopstick (1 m), others made a bunch of multiple loopsticks and
> >> >> would the coil around the bunch. I don't know which is the most
> >> >> effective way.
> >> >>
> >> >> I use tape and an aluminum channel to support the taped, end-to end
> >> >rods.
> >> >
> >> >cheers, Paul
> >> >
> >> That gives me an interesting thought: ever try putting a Faraday

shield around
> >> the rod?
> >>
> >> the aluminum channel served as a Faraday shield.
>
> My first thought is that if the aluminum channel is solid (already
assuming it's
> tubular,

It was a piece of 1" x 0.125" Aluminium right-angle stock about 23"
long. The 3-rod assy was laid in and taped.

>but 'solid' meaning not perforated or cut with slits), wouldn't eddy
> currents in the shield detune the coil and/or attenuate the signal?

The coil was tuned to resonance on the frequency in use by peaking the noise.

>Or was this
> stick for VLF?
>
160m, 80m, 40m.

> Either way, my idea was more along the lines of wrapping it up in some ribbon
> cable tied together at one end.
>
From a hill at a distance of 2-miles, said stick boresighted my antenna
at the null.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3078. Re: Unusual Question About Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 02:39:34 UTC
From: ^2@vc.net
Message-ID: <^2-2604031939340001@207.178.185.199>
Source record: 35845

In article <1m6kavoamgj2ov2mrs3d0cgr921eij5fhh@4ax.com>, Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:

> In <^2-2504030532320001@207.178.185.199>, ^2@vc.net (R.L. Measures) wrote:
>
> <snip>
> >> As for the arrival angles, are you sure you weren't phasing ground and skip?
> >>
> > doubtful since height above the lossy ground did not seem to effect the
> >observed angle.
>
> Interesting. I gotta play with that myself.
>
it was interesting to see arrival angle change substantially in a few 10s of seconds. It was almost like wind-driven rain.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3079. FRS Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 03:03:45 UTC
From: ValleyArts1@webtv.net
Message-ID: <26538-3EAB4891-646@storefull-2173.public.lawson.webtv.net>
Source record: 35846

Does anyone know if any of the frs type radios are employing phase modulation instead of the more common fm?

3080. FRS Radio headset wiring diagrams or schematics: 5200 series and 6000 series Motorola

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 03:16:23 UTC
From: Ron <Ron@onwisconsin.com>
Message-ID: <4somavsd99mu1ngokep9phiuhohs706nbn@4ax.com>
Source record: 35847
Cross-posted to: alt.radio.family,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.misc,rec.radio.swap

Greetings!
I have been trying for several days to find anything in the way of schematics for the 5200 and 6000 series FRS hand held transceivers. My need is to design a simple intercom/ interface system for use with these radios while riding my motorcycle with my wife as a passenger. Searches have rendered many sites that sell millions of these units but no tech talk.
The units that are on the market from HJC Chatterbox as well as Nadi don't do everything I would like them to do and are pricey too.
At the very least A simple headset/mic wiring diagram would be useful and welcomed.
Discriminator line tap point and squelch amp line location is needed too, hence the need for complete schematic.
I have e-mailed Motorola but have not received any reply as yet.
Thankyou for your time and consideration.
Ron
de N9GKH

Please e-mail me direct at ron@onwisconsin.com or reply to thread.

3081. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 03:18:55 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <636F747455557B8A.86CCDA493DBA778A.F529068763F7E3C2@lp.airnews.net>
Source record: 35848

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net...
> Wanted: At least 6 crystals all on the same fequency
> between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to build
> experimental transmitters for the
> 160m band.
> Does anyone have a batch of these gathering dust which
> they no longer need and willing to part with?

Duncan, you'll probably have an easier time finding a 3.8-4.0 MHz rock and
dividing it by two.

3082. Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 05:19:18 UTC
From: D & B Rude <brewman@merr.com>
Message-ID: <qLJqa.983$IU2.1178747@kent.svc.tds.net>
Source record: 35849

Hello,
I would like to either buy or build a transverter for my FT-840 so I could run all mode on 2 meters. Wouldn't mind one for 6 meters either, but am really really interested in one for hf to 2. Any help, schematics, info, new used, etc., greatly appreciated.
Dave
KA9SRU

3083. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 05:51:39 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b8fr5b$e7j$1@freenet9.carleton.ca>
Source record: 35850

"John R. Strohm" (strohm@airmail.net) writes:
> "Duncan Walters" <pentode@ntlworld.com> wrote in message
> news:PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net...
>> Wanted: At least 6 crystals all on the same fequency
>> between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to build
>> experimental transmitters for the
>> 160m band.
>> Does anyone have a batch of these gathering dust which
>> they no longer need and willing to part with?
>
> Duncan, you'll probably have an easier time finding a 3.8-4.0 MHz rock and
> dividing it by two.
>
>
Or for that matter, any crystal that divides down to 160m. Once
the divider is in place, it doesn't really matter if the crystal is
twice the signal frequency, or higher.

Indeed, if someone is looking for multiple frequencies, use
an oscillator that won't need fiddling with changes of frequency,
and then uses something like the 4024 7stage ripple counter. I suppose
it would be 74HC4024. Then if one crystal is twice the frequency,
use only the first output, while another crystal might be 4 or
8 times the frequency, and the suitable output would be selected.

Michael VE2BVW

3084. Re: Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 10:06:53 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7_Nqa.588$hD4.61207@newsfep1-win.server.ntli.net>
Source record: 35851

> I would like to either buy or build a transverter for my FT-840 so I could
> run all mode on 2 meters. Wouldn't mind one for 6 meters either, but am
> really really interested in one for hf to 2. Any help, schematics, info,
new
> used, etc., greatly appreciated.
==========
An excellent design can be found in VHF / UHF DX Book , edited by G3SEK
The first edition I have is labelled ISBN 0 9520468 0 6
It should be available in the USA ,possibly through ARRL.
It is meant for transverting 28 - 30 MHz to 144-146 MHz using a 116 MHz
crystal
If the transverter is also to be used in ITU-Zone 2 with 144 -148 MHz
amateur allocation an additional 118 MHz crystal will be required , unless
the HF transceiver is converted to wide band use (usually done by
removing/clipping a jumper)

I believe Ten-Tec are selling a kit for a HF to 2m transverter

Frank gm0csz.kn6wh@ntlworld.com

3085. Re: FRS Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 10:39:10 UTC
From: W3JDR <joe@roccis.com>
Message-ID: <irOqa.13289$J27.12879@nwrdny02.gnilink.net>
Source record: 35852

Ron,

It's highly unlikely.

In order to get the rquired FM deviation from PM, you have to have to generate the PM at a low frequency and go through a number of frequency multiplier stages. With modern implemenataions (FRS is a pretty recent thing), everyting is done 'on frequency' with PLL control. That's the only viable way to make it so simple, power efficient, and cheap.

Joe
W3JDR

<ValleyArts1@webtv.net> wrote in message
news:26538-3EAB4891-646@storefull-2173.public.lawson.webtv.net...
> Does anyone know if any of the frs type radios are employing phase
> modulation instead of the more common fm?
>

3086. Wanted: Telrex TB6EM or 20 meter monobander

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 12:20:06 UTC
From: el34guy@aol.com
Message-ID: <20030427082006.21057.00000157@mb-m18.aol.com>
Source record: 35853

Im travelling to Dayton this year through Iowa, Illinois, Indiana, and Ohio. If anyone has a good Telrex TB6EM or a good 3-5 element 20 meter monobander beam in good shape along the way let me know. I have a trailer and can pick it up at Dayton or along the way. 73 and thanks.

Mark
W0NCL

3087. Re: Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 12:55:32 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pan.2003.04.27.12.55.31.370287@oceanfree.net>
Source record: 35854

On Sun, 27 Apr 2003 05:19:18 +0000, D & B Rude wrote:

> Hello,
> I would like to either buy or build a transverter for my FT-840 so I could
> run all mode on 2 meters. Wouldn't mind one for 6 meters either, but am
> really really interested in one for hf to 2. Any help, schematics, info, new
> used, etc., greatly appreciated.
> Dave
> KA9SRU

'Linear Transverters for 144 and 220 MHz' by Paul Drexler
WB3JYO from the ARRL Handbook 1993.

Google for JAVORNIK-144/14 transverter.

I have recently built two 10M/2M transverters. I will
put the details on my web-page, eventually...........

73, Ed. EI9GQ.

--

Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

3088. Re: Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 13:41:39 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pan.2003.04.27.13.41.39.445410@oceanfree.net>
Source record: 35855

On Sun, 27 Apr 2003 12:55:32 +0000, Eamon Skelton wrote:

>
> Google for JAVORNIK-144/14 transverter.
>

The JAVORNIK-144/14 transverter was built by
S53WW. See: http://lea.hamradio.si/~s53ww/xvrt/xvrt.htm

73, Ed. EI9GQ

--

Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

3089. Re: FRS Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:09:53 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <9vonav05pups8qihdkktridn99nq5gap9g@4ax.com>
Source record: 35856

On Sun, 27 Apr 2003 10:39:10 GMT, "W3JDR" <joe@roccis.com> wrote:

><ValleyArts1@webtv.net> wrote in message
>news:26538-3EAB4891-646@storefull-2173.public.lawson.webtv.net...
>> Does anyone know if any of the frs type radios are employing phase
>> modulation instead of the more common fm?
>>
>In order to get the rquired FM deviation from PM, you have to have to
>generate the PM at a low frequency and go through a number of frequency
>multiplier stages. With modern implemenataions (FRS is a pretty recent
>thing), everyting is done 'on frequency' with PLL control. That's the only
>viable way to make it so simple, power efficient, and cheap.
>
As a sidebar, ANY modification to the radio will void the type
acceptance from the FCC, and it would no longer be legal to use.

But as Joe says, they are designed to be inexpensive and not to be
worked on.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3090. Re: help needed for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:17:02 UTC
From: Ben Veen <ben_veen@Hotmail.com>
Message-ID: <b8gooaqom1@news.tudelft.nl>
Source record: 35857

"An alternative might be to send data over a network of packet radio
stations.
The effective data rate would be even lower, but transmission over the
network
might be between numerous stations that are close enough together that they
do
not require any over-the-horizon paths. Some of the paths may even be via
internet!"
......

Does that mean one should have to search for friends in order to use their
packet radio station?

Ben

"Fred McKenzie" <fmmck@aol.com> schreef in bericht
news:20030424220056.27031.00000038@mb-m24.aol.com...
> << I have to design a system which can send 2 MByte of data over the
world. I
> want to use a Fritzel GPA30 vertical antenna for that which can receive
data
> at 14/21/28 MHz. I found some-one in the Netherlands that has such a
system
> and now I am searching for somebody in the world to send a 2 Mbyte of
data. >>
>
> Ben-
>
> There are popular Amateur Radio systems that are capable of sending data
over
> long distances. These are primarily teletype-like systems such as Amtor
or
> Packet Radio.
>
> One thing that characterizes them, is their extremely low data rate when
used
> on frequencies that have around-the-world range. I understand that below
29
> MHz in the U.S., the data rate is limited by law to 300 Baud, and to 1200
Baud
> between 29 and 29.7 MHz. The throughput rate is usually less because
> transmissions must sometimes be repeated many times to overcome noise and
> interference from other station's transmissions. Therefore, sending a
large
> amount of data requires a large amount of time. In other words, you won't

be
> able to view a QuickTime movie at full speed until all of the file has
been
> received.
>
> And it isn't simply a matter of law. You are not likely to find equipment
> capable of sending data on those frequencies at a much higher data rate.
>
> You don't say how much of the system your design must include. You might
> simply specify use of Amateur Radio transceivers coupled with Packet
modems and
> terminal software, at each end of the link. Such a system might be able
to
> send the data over the 14, 21 or 28 Mhz bands, but only when conditions
are
> right for the required path. On 14 MHz you might be able to send the data
at
> some time during a 24 hour period. On 28 MHz, you might have to wait
several
> days for conditions to be good enough to support sending the data, and
just
> hope they stay good long enough to send it all.
>
> An alternative might be to send data over a network of packet radio
stations.
> The effective data rate would be even lower, but transmission over the
network
> might be between numerous stations that are close enough together that
they do
> not require any over-the-horizon paths. Some of the paths may even be via
> internet!
>
> 73, Fred, K4DII
>

3091. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:29:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <kvpnav8r8cqe8cudeopcq767dqb5atcau9@4ax.com>
Source record: 35858

On Sat, 26 Apr 2003 19:25:02 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:

[snip]

|> Also, don't you know---ooops of course you don't---that the impedance
|> of a 2 meter high, 75 meter dipole over average ground, has an
|> impedance *greater* than 50 ohm (~60), not lower.
|
|ï¿½ As I recall, according to the literature, radiation R is max at a
|half-wave and decreases as height above ground decreases.

You need to peak at "the literature" again.
|
|>So your other
|> unsubstantiated old wives' claim is untrue also.
|>
|ï¿½ R did not matter since I was trying to find the length a counterpoise
|for a 0.33 wave length vertical 2-m aove ground.

Of course.
|
|> A few minutes with even the free version of EZNEC would serve you
|> well.
|
|ï¿½ I prefer hands-on measurements.

Normally I would recommend that you at least use a computer analysis
as a "sanity check", but that is dangerous ground for you, so I
understand your reluctance.

Ciao

BTW, this would be better discussed in rec.radio.amateur.antenna

3092. Aperiodic Loop Query

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:41:56 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <U_Rqa.17434$xB4.617347@news2.east.cox.net>
Source record: 35859

If I make an amplified aperiodic (untuned) loop antenna, what is the best approach for the
antenna coil? Ferrite bar or a larger loop?

How do you determine the best inductance for a given frequency span--say LF through 3 MHz, or would that have to be done with taps on the loop?

Peter

3093. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:46:28 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3eabed5c$0$19921@echo-01.iinet.net.au>
Source record: 35860

Jan
I cant access your scope pictures.
However as you know I have built a similar board (didnt I send you one?) and the output of mine was superclean, both on a spectrum analyser and a scope. It was also pretty clean to listen to on a receiever. I didnt measure jitter as such but in theory the random phase noise of the DDS should be pretty good, nearly as good as its clock. The CMOS process should yield figures from the DDS itself of a noise floor in the region of -140 dBc/Hz. The PLL clock multiplier will degrade the clock source somewhat by 20 log N dB where N is is the multiplication ratio, plus a bit for other factors. The problem of course, is discrete spurs which are about -50 dBc worst case but they should be better than this at 1 MHz with a 200 MHz clock.
Looking at your construction, I suspect there is an error there somewhere as it damn near impossible to construct those things without a masked PCB. Have you got a separate ground plane and supply for analog and digital sections? Are there any earth loops? Are all the relevant pins grounded? Is the comparator switched off as you dont seem to be using it?

Richard

Jan Wagner <jwagner@cc.hut.fi> wrote in message
news:b7kbhf$7o9$1@nyytiset.pp.htv.fi...
> Hi,
>
> I've a AD9854 DDS running, but the output is very "wobbly" even
> after filtering. It runs at 200MHz (50MHz x 4). Low pass
> filtering at 50 MHz with a 3-pole C-LC. Even a 1 MHz DDS output
> the signal is very messy, with low frequency "wobble" content.
> Here are two scope traces to show what I mean:
>
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470kHz-wobble-
> 1.gif
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470khz-wobble-
> 2.gif
> (the grey area is the afterglow you'd see on a CRT scope)
>
> As the scope pics show, at 1.470 MHz the max phase noise (or,
> jitter...) is about 20ns peak-to-peak. Really horrible... The
> cheap 50MHz reference xtal oscillator which clocks the DDS is
> rock solid compared to these 20ns of jitter.
>
> Shouldn't the DDS output show much less phase noise??
>
> Esp. as the DDS reference clock jitter gets divided down into the
> output (t.ex. 50MHz=>1.47, 34:1 jitter reduction)?

>
> Or is the 10nF 1.3kOhm PLL filter recommended in the AD9854 not
> "good enough"? I tried a poly cap + standard resistor
> combination, and later a chip cap + smd resistor, same result.
> Btw, analog and digital supply rails on the chip show <<20mV
> ripple or mess, so a bad layout or supply RF decoupling probably
> isn't be the problem here...
>
> And - if someone has tried - is the output less jittery if
> directly clocking the AD9854 from t.ex. a 200MHz low-jitter SAW
> oscillator?
>
> puzzled why it works so lousily...
>
> - Jan
>
>
>
>

3094. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:50:25 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <FF4A0EE8D1302D0B.F528B63CE50DE48D.3B5604CB198C56ED@lp.airnews.net>
Source record: 35797

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
news:b8fr5b$e7j$1@freenet9.carleton.ca...
> "John R. Strohm" (strohm@airmail.net) writes:
> > "Duncan Walters" <pentode@ntlworld.com> wrote in message
> > news:PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net...
> >> Wanted: At least 6 crystals all on the same fequency
> >> between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to
build
> >> experimental transmitters for the
> >> 160m band.
> >> Does anyone have a batch of these gathering dust which
> >> they no longer need and willing to part with?
> >
> > Duncan, you'll probably have an easier time finding a 3.8-4.0 MHz rock
and
> > dividing it by two.
> >
> >
> Or for that matter, any crystal that divides down to 160m. Once
> the divider is in place, it doesn't really matter if the crystal is
> twice the signal frequency, or higher.
>
> Indeed, if someone is looking for multiple frequencies, use
> an oscillator that won't need fiddling with changes of frequency,
> and then uses something like the 4024 7stage ripple counter. I suppose
> it would be 74HC4024. Then if one crystal is twice the frequency,
> use only the first output, while another crystal might be 4 or
> 8 times the frequency, and the suitable output would be selected.

I started to suggest that they should go for a PLL synthesizer.

3095. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 14:57:39 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3eabeffc$0$19914@echo-01.iinet.net.au>
Source record: 35798

Jan
I note also that the output resistors on the DAC are metal film? would these have too much inductance in this situation?

Richard

Jan Wagner <jwagner@cc.hut.fi> wrote in message news:b7kbhf$7o9$1@nyytiset.pp.htv.fi...
> Hi,
>
> I've a AD9854 DDS running, but the output is very "wobbly" even
> after filtering. It runs at 200MHz (50MHz x 4). Low pass
> filtering at 50 MHz with a 3-pole C-LC. Even a 1 MHz DDS output
> the signal is very messy, with low frequency "wobble" content.
> Here are two scope traces to show what I mean:
>
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470kHz-wobble-
> 1.gif
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470khz-wobble-
> 2.gif
> (the grey area is the afterglow you'd see on a CRT scope)
>
> As the scope pics show, at 1.470 MHz the max phase noise (or,
> jitter...) is about 20ns peak-to-peak. Really horrible... The
> cheap 50MHz reference xtal oscillator which clocks the DDS is
> rock solid compared to these 20ns of jitter.
>
> Shouldn't the DDS output show much less phase noise??
>
> Esp. as the DDS reference clock jitter gets divided down into the
> output (t.ex. 50MHz=>1.47, 34:1 jitter reduction)?
>
> Or is the 10nF 1.3kOhm PLL filter recommended in the AD9854 not
> "good enough"? I tried a poly cap + standard resistor
> combination, and later a chip cap + smd resistor, same result.
> Btw, analog and digital supply rails on the chip show <<20mV
> ripple or mess, so a bad layout or supply RF decoupling probably
> isn't be the problem here...
>
> And - if someone has tried - is the output less jittery if
> directly clocking the AD9854 from t.ex. a 200MHz low-jitter SAW
> oscillator?
>
> puzzled why it works so lousily...
>

> - Jan
>
>
>
>

3096. Building a practical EH-antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 15:33:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3eabd486.6922220@news.online.no>
Source record: 35799

Hi
being somewhat confursed about the information from some sources I
wonder if it is a site where more practical information is presented
for building an antenna for transmission on ham bands

I could start with 40m, but 160M is also useful, and not at least
would be needed an antenna for 136kHz if possible

73
Jan-Martin
LA8AK, http://home.online.no/~la8ak/93.htm
--
remove ,xnd to reply

3097. Re: Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 15:39:20 UTC
From: Ron <Ron@onwisconsin.com>
Message-ID: <n55oavcquprsgojbfbq5953dartkc6smfa@4ax.com>
Source record: 35800

Check out Ten-Tec for their line of transverters;
http://www.tentec.com/Xvertkit.HTM

Ron
de N9GKH
On Sun, 27 Apr 2003 05:19:18 GMT, "D & B Rude" <brewman@merr.com>
wrote:

>Hello,
>I would like to either buy or build a transverter for my FT-840 so I could
>run all mode on 2 meters. Wouldn't mind one for 6 meters either, but am
>really really interested in one for hf to 2. Any help, schematics, info, new
>used, etc., greatly appreciated.
>Dave
>KA9SRU
>

3098. Re: FRS Radio headset wiring diagrams or schematics: 5200 series and 6000 series Motorola

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 18:00:46 UTC
From: "G. M. Alf" <gmalf.ears@verizon.net>
Message-ID: <7k6oavsi5tl08v50kroki513tnu45fj07c@4ax.com>
Source record: 35801
Cross-posted to: alt.radio.family,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.misc,rec.radio.swap

On Sun, 27 Apr 2003 03:16:23 GMT, Ron <Ron@onwisconsin.com> wrote:

>Greetings!
> I have been trying for several days to find anything in the way of
>schematics for the 5200 and 6000 series FRS hand held transceivers.

Go to: http://www.fcc.gov/oet/fccid/

Enter the FCC ID# of the radio in question then look through the
exhibits. You'll find the schematic there.

Mike

3099. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 19:49:28 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <cvWqa.23469$xB4.701253@news2.east.cox.net>
Source record: 35803

>
> Realistically, it's the coax phasing lines that are important. I'm
> not sure there is a lot of reason to duplicate the rest of the old
> circuitry, when others have shown phasing circuitry, using more
> recent components. There's no sense tracking down a B&W 2Q4
> audio phasing network when it's now far easier to get precision
> components.
>
> Michael VE2BVW

I'd think the coax phasing lines are the least critical to set up. A simple trimmer cap can be used to precisely set the desired 90 degree phase shift.

The audio phasing is very critical, and it is difficult to maintain the 90 degree phase shift AND the levels over the range of 300 to 3,000 kHz. There are better means to do the audio phase shifts than the B+W which was only rated to be within 1.5 percent of 90 degrees.

Peter, k1zjh

3100. Items for auction - may be of interest

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 20:12:50 UTC
From: ? <Martin@NO_SPAM.g1gyc.demon.co.uk>
Message-ID: <b8hdkkhlb1$8302bc10@news.demon.co.uk>
Source record: 35804
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Please take a look at the auctions I currently have running.

several power supplies, panel meters and a coaxial relay

http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

cheers martin

3101. FS: NOS Eimac 304TL $65

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 20:31:48 UTC
From: ethan <read_message@to.reply>
Message-ID: <U6Xqa.109026$Si4.92871@rwcrnsc51.ops.asp.att.net>
Source record: 35805
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Reply to:
arficusATyahooDOTcom (to reply, replace AT with @ and DOT with .)

In original box. I can't test, but I'll
guaranty it not to be DOA. $65 + ship. from 98226.
The caveat- I'm leaving for a trip on Friday, so payment will have
to be USPS money order sent on Monday via priority mail.

Ethan

3102. FS: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 20:34:05 UTC
From: Mike Nowlen <mnowlen@comcast.net>
Message-ID: <sffoav05tk2g3m8hrs23qtrb5loeu0ebtk@4ax.com>
Source record: 35802
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

Picture at:
http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@comcast.net

3103. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 20:57:41 UTC
From: novatech@eskimo.com
Message-ID: <b8hg85ldq1@eskinews.eskimo.com>
Source record: 35806

"Richard Hosking" <richardh@iinet.net.au> writes:

>Jan
>I note also that the output resistors on the DAC are metal film? would these
>have too much inductance in this situation?

>Richard

No that won't make any difference. Have you put your output up on an
spectrum analyser?

Again, make sure there's no pickup on the PLL pins (shielding).

I will see what I get at 1.47MHz with a 200MHz clock. I should be able to
put a photo up.

Steve.
--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

3104. RCA 7213

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 21:46:47 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <bdYqa.113754$gK.216839@rwcrnsc52.ops.asp.att.net>
Source record: 35807

Anyone with a data sheet for the tube or a steer to one on the web? I let go of my only copy when I sold my moonbounce station and just found a couple more tubes.

TIA

W4ZCB

3105. Re: FRS Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 22:05:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vaol1g7jnivu33@corp.supernews.com>
Source record: 35808

I don't know specifically about FRS, but it's standard for communications and FM broadcast gear to use pre-emphasis. This causes a frequency deviation that's directly proportional to modulating frequency above the pre-emphasis break point -- that is, over most of the audio range. Over this range, the modulation is identical to PM with no pre-emphasis. So pre-emphasized FM, which is the standard, ends up producing modulation that's the same as non pre-emphasized PM over most of the audio range. Some or most older commercial communications gear just used PM for modulation, using a de-emphasis circuit to flatten it out below the pre-emphasis breakpoint. The result was identical to pre-emphasized FM.

Roy Lewallen, W7EL

3106. Re: FRS Radio headset wiring diagrams or schematics: 5200 series and 6000 series Motorola

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 22:15:34 UTC
From: Ron <Ron@onwisconsin.com>
Message-ID: <9asoav87fgcp6mj2le5nnpstbip0opeo7r@4ax.com>
Source record: 35809
Cross-posted to: alt.radio.family,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.misc,rec.radio.swap

Thanks Mike for the Link
http://www.fcc.gov/oet/fccid

It has exactly what I needed.

Quite a powerful bit of info here!
Thanks again!

Ron
de N9GKH

On Sun, 27 Apr 2003 18:00:46 GMT, G. M. Alf <gmalf.ears@verizon.net>
wrote:

>On Sun, 27 Apr 2003 03:16:23 GMT, Ron <Ron@onwisconsin.com> wrote:
>
>>Greetings!
>> I have been trying for several days to find anything in the way of
>>schematics for the 5200 and 6000 series FRS hand held transceivers.
>
>Go to: http://www.fcc.gov/oet/fccid/
>
>Enter the FCC ID# of the radio in question then look through the
>exhibits. You'll find the schematic there.
>
>Mike

3107. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 23:28:09 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <rqpoavc7rpb8192guap1d5rqh3g86i7lhq@4ax.com>
Source record: 35810

On Sun, 27 Apr 2003 07:29:27 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

[snip]
|
|You need to peak at "the literature" again.

Make that "peek at the literature"

3108. Re: RCA 7213

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-27 23:39:57 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EADBCA9.28BB4ECE@rica.net>
Source record: 35861

"Harold E. Johnson" wrote:
>
> Anyone with a data sheet for the tube or a steer to one on the web? I let go
> of my only copy when I sold my moonbounce station and just found a couple
> more tubes.
>
> TIA
>
> W4ZCB

Here's a start:
http://www.nj7p.org/cgi-bin/tube?tube=7213

--
John Popelish

3109. 7213

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 00:35:45 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <BH_qa.374254$OV.396252@rwcrnsc54>
Source record: 35862

Thanks to all, I have the data again.

W4ZCB

3110. Re: help needed for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 03:44:20 UTC
From: fmmck@aol.com
Message-ID: <20030427234420.19783.00000236@mb-m20.aol.com>
Source record: 35863

<< Does that mean one should have to search for friends in order to use their packet radio station? >>

Ben-

It has been many years since I was active in Packet Radio. Back in the late 80s and early 90s it was possible to send messages equivalent to today's internet E-Mail, using "bulletin boards" as message servers. Those bulletin board stations passed messages along the existing network of packet radio stations. The messages were routed to the specific bulletin board station where the recipient would retrieve the message.

If you knew where packet stations were located, you could connect to a more distant station by specifying the route to be used. Your message packets would be relayed through each successive station until it arrived at the distant station. Once you were connected, you could send a message to the distant station. If I recall correctly, some systems were being developed that could route the connections automatically using the destination ZIP code.

There were some stations using TCP/IP protocol over Packet Radio. Using TCP/IP with ftp (file transfer protocol), those stations could upload and download files from their station to the distant station. I think this method would be your best bet. I expect software is still available, but I don't have any personal experience doing this.

After all this time, I expect there have been developments in Packet Radio I haven't heard about. I'm not sure the networks have extended throughout the world, but you still might be able to transmit your file with a single hop if you choose the right frequency and the right time.

73, Fred, K4DII

3111. WTB: Turns counter [UK]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 07:08:20 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b8ijt4$a4jeu$1@ID-150848.news.dfncis.de>
Source record: 35864
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi. Has anyone got a turns counter for sale or a pair of turncounters? Maybe you have something ex equipment. Needed for 37 turns rollercoaster. Probably is not digital, (too expensive) but readout dial is probably just a circular disc or ring. Shaft on roller coaster is 1/4 inch. I'm in UK.

Email:

news_email@REMOVEntlworld.com

Please remove, "REMOVE".

Rich.

3112. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 08:54:51 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <ppqpavomn5i63ksbqkm1u5503td5l461nm@4ax.com>
Source record: 35865

>I'd think the coax phasing lines are the least critical to set up. A simple
>trimmer cap can be used to precisely set the desired 90 degree phase
>shift.

A very simple lpf can do this too, one serial coil followed by one parallel cap.
It's used in vhf helical duplexers quite often instead of space hogging coiled
up 1/4 wave coax lines.

Clive

3113. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 09:04:24 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <v86ra.297$dP5.263@newsfep1-gui.server.ntli.net>
Source record: 35866

Thanks everyone for all your suggestions.
I am sure we have plenty to go on now.
I do think though that the PLL synth idea is a little like taking
a sledgehammer to crack a nut!

Best 73

Duncan G4DFV

3114. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 10:49:48 UTC
From: ^2@vc.net
Message-ID: <^2-2804030349480001@192.168.1.200>
Source record: 35867

In article <kvpnav8r8cqe8cudeopcq767dqb5atcau9@4ax.com>, Wes Stewart <n7ws@#arrl.net> wrote:

> On Sat, 26 Apr 2003 19:25:02 -0700, ^2@vc.net (R.L. Measures) wrote:
>
> [snip]
>
> |> Also, don't you know---ooops of course you don't---that the impedance
> |> of a 2 meter high, 75 meter dipole over average ground, has an
> |> impedance *greater* than 50 ohm (~60), not lower.
> |
> |R As I recall, according to the literature, radiation R is max at a
> |half-wave and decreases as height above ground decreases.
>
> You need to peak at "the literature" again.
> |
R Have you perhaps been imbibing a bit ?

> |>So your other
> |> unsubstantiated old wives' claim is untrue also.
> |>
> |R R did not matter since I was trying to find the length a counterpoise
> |for a 0.33 wave length vertical 2-m aove ground.
>
> Of course.
> |
> |> A few minutes with even the free version of EZNEC would serve you
> |> well.
> |
> |R I prefer hands-on measurements.
>
> Normally I would recommend that you at least use a computer analysis
> as a "sanity check",

R If the dip on the meter is not where computer analysis predicts resonance to be, should one trust the computer or the dip on the dipmeter?

>but that is dangerous ground for you, so I
> understand your reluctance.
>
R Wes plays the Ad Hominem Card. // Do you still agree with Mr. Rauch's assertion that the RF resistance of Ni-Cr alloy increases as frequency decreases - and vice-versa? Do you still agree with Mr. Rauch's assertion that AC circuit analysis does not work with VHF

parasitic-suppressors?
>
> BTW, this would be better discussed in rec.radio.amateur.antenna

 perhaps, but the 3.8MHz elevated vertical antenna in question was a homebrew project. // A question -- is this a moderated/censored Newsgroup? tnx

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3115. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 10:52:33 UTC
From: ^2@vc.net
Message-ID: <^2-2804030352330001@192.168.1.200>
Source record: 35868

In article <rqpoavc7rpb8192guap1d5rqh3g86i7lhq@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Sun, 27 Apr 2003 07:29:27 -0700, Wes Stewart <n7ws@#arrl.net>
> wrote:
>
> [snip]
> |
> |You need to peak at "the literature" again.
>
> Make that "peek at the literature"

• sober copy-editing is probably not a bad idea.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3116. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 13:05:59 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <dc9qavgt7tnbhvn5v0gqitv1pqnsfs7ugk@4ax.com>
Source record: 35869

On Mon, 28 Apr 2003 03:49:48 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:

|In article <kvpnav8r8cqe8cudeopcq767dqb5atcau9@4ax.com>, Wes Stewart
|<n7ws@#arrl.net> wrote:
|
|> On Sat, 26 Apr 2003 19:25:02 -0700, ^2@vc.net (ï¿½R.L. Measures) wrote:
|>
|> [snip]
|>
|> |> Also, don't you know---ooops of course you don't---that the impedance
|> |> of a 2 meter high, 75 meter dipole over average ground, has an
|> |> impedance *greater* than 50 ohm (~60), not lower.
|> |
|> |ï¿½ As I recall, according to the literature, radiation R is max at a
|> |half-wave and decreases as height above ground decreases.
|>
|> You need to peak at "the literature" again.
|> |
|ï¿½ Have you perhaps been imbibing a bit ?

What difference does it make, I found my mistake before you did.
|
|> |>So your other
|> |> unsubstantiated old wives' claim is untrue also.
|> |>
|> |ï¿½ R did not matter since I was trying to find the length a counterpoise
|> |for a 0.33 wave length vertical 2-m aove ground.
|>
|> Of course.
|> |
|> |> A few minutes with even the free version of EZNEC would serve you
|> |> well.
|> |
|> |ï¿½ I prefer hands-on measurements.
|>
|> Normally I would recommend that you at least use a computer analysis
|> as a "sanity check",
|
|ï¿½ If the dip on the meter is not where computer analysis predicts
|resonance to be, should one trust the computer or the dip on the dipmeter?

Neither until you resolve the difference.
|
|
|>but that is dangerous ground for you, so I

|> understand your reluctance.
|>
|ï¿½ Wes plays the Ad Hominem Card. // Do you still agree with Mr. Rauch's
|assertion that the RF resistance of Ni-Cr alloy increases as frequency
|decreases - and vice-versa? Do you still agree with Mr. Rauch's
|assertion that AC circuit analysis does not work with VHF
|parasitic-suppressors?

Stick a fork in that discussion.

|>
|> BTW, this would be better discussed in rec.radio.amateur.antenna
|
|ï¿½ perhaps, but the 3.8MHz elevated vertical antenna in question was a
|homebrew project. // A question -- is this a moderated/censored
|Newsgroup? tnx

No, fortunately for you, it isn't. Neither is r.r.a.a, where I again
suggest you post antenna related stuff.

3117. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 15:30:05 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <2741B5E4CCD606C3.4681F528C47E39F3.E797B77B26E85C60@lp.airnews.net>
Source record: 35870

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:v86ra.297$dP5.263@newsfep1-gui.server.ntli.net...
> Thanks everyone for all your suggestions.
> I am sure we have plenty to go on now.
> I do think though that the PLL synth idea is a little like taking
> a sledgehammer to crack a nut!

Well, Duncan, it really depends on what you are trying to do.

160m is not exactly cutting-edge technology these days.

3118. Re: Inverted-V Dipole Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 15:55:28 UTC
From: ^2@vc.net
Message-ID: <^2-2804030855280001@192.168.1.200>
Source record: 35871

In article <dc9qavgt7tnbhvn5v0gqitv1pqnsfs7ugk@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Mon, 28 Apr 2003 03:49:48 -0700, ^2@vc.net (R.L. Measures) wrote:
>
> |In article <kvpnav8r8cqe8cudeopcq767dqb5atcau9@4ax.com>, Wes Stewart
> |<n7ws@#arrl.net> wrote:
> |
> |> On Sat, 26 Apr 2003 19:25:02 -0700, ^2@vc.net (R.L. Measures) wrote:
> |>
> |> [snip]
> |>
> |> |> Also, don't you know---ooops of course you don't---that the impedance
> |> |> of a 2 meter high, 75 meter dipole over average ground, has an
> |> |> impedance *greater* than 50 ohm (~60), not lower.
> |> |
> |> |R As I recall, according to the literature, radiation R is max at a
> |> |half-wave and decreases as height above ground decreases.
> |>
> |> You need to peak at "the literature" again.
> |> |
> |R Have you perhaps been imbibing a bit ?
>
> What difference does it make, I found my mistake before you did.

R you read this Newsgroup before I did. As I recall, Mr. Rauch made a
higher number of mistakes when he was seemingly imbibing.
> |
> |> |>So your other
> |> |> unsubstantiated old wives' claim is untrue also.
> |> |>
> |> |R R did not matter since I was trying to find the length a counterpoise
> |> |for a 0.33 wave length vertical 2-m aove ground.
> |>
> |> Of course.
> |> |
> |> |> A few minutes with even the free version of EZNEC would serve you
> |> |> well.
> |> |
> |> |R I prefer hands-on measurements.
> |>
> |> Normally I would recommend that you at least use a computer analysis
> |> as a "sanity check",
> |

> |• If the dip on the meter is not where computer analysis predicts
> |resonance to be, should one trust the computer or the dip on the dipmeter?
>
> Neither until you resolve the difference.

• the dipmeter freq scale was found to be accurate with a frequency counter.
> |
> |
> |>but that is dangerous ground for you, so I
> |> understand your reluctance.
> |>
> |• Wes plays the Ad Hominem Card. // Do you still agree with Mr. Rauch's
> |assertion that the RF resistance of Ni-Cr alloy increases as frequency
> |decreases - and vice-versa? Do you still agree with Mr. Rauch's
> |assertion that AC circuit analysis does not work with VHF
> |parasitic-suppressors?
>
> Stick a fork in that discussion.
>
• guffaw. Rauch seems to have bailed out of AMPS, again.
> |>
> |> BTW, this would be better discussed in rec.radio.amateur.antenna
> |
> |• perhaps, but the 3.8MHz elevated vertical antenna in question was a
> |homebrew project. // A question -- is this a moderated/censored
> |Newsgroup? tnx
>
> No, fortunately for you, it isn't.

• indeed, Wes. I have been jackbooted off the AMPS mailing list thrice,
apparently because I just wasn't playing nice. On the Towertalk mailing
list, I got booted for examining technical statements a bit too closely..
A survey of users revealed that the censor/moderator lives in a family of
assertive women where does not wear the pants, so he apparently
compensates by doing so on Ham radio.

> Neither is r.r.a.a, where I again
> suggest you post antenna related stuff.

• RR

cheers

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3119. WTB: Vacuum cap de W7ZFB

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 16:20:50 UTC
From: msix@plato.nmia.com
Message-ID: <Cxcra.2431$C5.126@fe01.atl2.webusenet.com>
Source record: 35872

One or two small 270pF or 300pF fixed vacuum caps.
3KV rating plenty.
73 W7ZFB

3120. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 19:05:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304281105.4cd592e3@posting.google.com>
Source record: 35873

Serge <poissondanlo@wanadoo.fr> wrote in message news:<3E95352C.8020900@wanadoo.fr>...
> Hello dears Om
> i am searching about homebrewing a 2 m SSB phasing , have an idea ?
> thinks in advance
> Serge /f5jtm

There has been mention in the thread of using coax sections for phasing. You could also use a quadrature (90 degree) 3dB hybrid. You can build one from line sections, or from lumped components. It's fairly simple, though more complex than just a 1/8 and a 3/8 wave line. I believe it will give you a more stable phase difference than the simple lengths of line. It is also a directional coupler, though you probably don't care about that for this application. You can probably find details with a web search. You'd connect the quadrature outputs to mixer LO inputs through lines or whatever that were matched, so the phase difference is preserved.

Cheers,
Tom

3121. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-28 20:00:25 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EAD8859.50604@wanadoo.fr>
Source record: 35874

Hi Tom
coax phasing is fairly easy to talk but not easy to do , i think phasing
is in IF and not HF , so it seems that coaxial is very long
but, i will look the R2/T2
73's
Serge

3122. Re: Help with Z80 :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 02:11:03 UTC
From: VE3CWJ <"my callsign"@rac.ca>
Message-ID: <varnq3g03qdv95@corp.supernews.com>
Source record: 35875

"scharkalvin" <wa2mze@bellsouth.net> wrote in message
news:3E9F5066.1000101@bellsouth.net...
> Michael Black wrote:
> > "S Fisher" (nospam@nospam.com) writes:
> >
> >>Hi all,
> >>
> >>I am trying to build a simple Z80 circuit with a 2k EPROM (2716) and a
2k
> >>SRAM (6116) and am trying to remember the best way of handling the chip
> >>selects. I seem to remember something about slow EPROMS causing a
problem?
> >>
> >>I have a schematic at http://sholtz.port5.com/z80.html which I think is
> >>correct and should give me a ROM range of 0000h - 07ffh and a RAM range
of
> >>0800h - 0FFFh. But I would be pleased if anyone has any better
> >>suggestions/advice...
> >>
> >>S Fisher
> >>inbox at sholtz dot port5 dot com
> >>
> >>
> >
> > Of course, when the issue of slow EPROMs with CPUs came up,
> > the EPROMs did have slower access time.
> >
> > Pete Stark once mentioned something about this, in one of
> > his articles about the SWTP's 6800. I can't remember the
> > detail, but he suggested leaving one of the pins enabled,
> > rather than selecting it when needed, which apparently got
> > rid of some of the delay time. Obviously, it would have to
> > be the output enable or chip enable. The former does not make
> > sense, unless the output actually doesn't work unless the
> > chip is enabled. Maybe this prompts someone to remember exactly
> > what the scheme was.
> >
> > Michael VE2BVW
> >
> >
>
> Leave the chip select enabled and gate the output enable pin with and
> and of
> the address decode and the read signal. This will net you and extra

10-50ns
> of access time advantage.
>
> Don't gate the memsel signal with the read strobe. Combine the address
> decode
> with the memsel signal. This will also net you a few ns advantage.
>
>
>
Actually, by leaving the CE enabled all the time, you gain about half the access time with the older chips. Many of the older 2716 eproms are 450ns or 350ns. Setting CE on all the time and using OE to toggle output, will give you about 200 to 150ns access time or better.
I've used a similar design for an IC-271A no-fail memory, using a 2716 and 6116, with CE enabled all the time with no problems. It all depends on how fast you want to push the Z80 in your design.....

Steve
VE3CWJ

3123. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 03:55:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304281955.55ee794f@posting.google.com>
Source record: 35876

Serge <poissondanlo@wanadoo.fr> wrote in message news:<3EAD8859.50604@wanadoo.fr>...
> Hi Tom
> coax phasing is fairly easy to talk but not easy to do , i think phasing
> is in IF and not HF , so it seems that coaxial is very long
> but, i will look the R2/T2
> 73's
> Serge

I assumed you'd want to do it directly at 144MHz; otherwise, why talk
about 2m? If you do the generation and detection at an IF frequency,
then the RF part is just mixing and linear amplification.

But no matter, a quadrature hybrid can be done at low frequencies with
lumped elements (inductors and capacitors). Similarly, the phase
shift of transmission lines at a single frequency can be done with
lumped components as well. Of course, you can also do it by starting
at four times the (IF) carrier frequency and dividing down; you can
get pretty good quadrature that way.

Cheers,
Tom

3124. Drake TR-7 mic. connector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 05:16:51 UTC
From: Steve <steve_lyon@prodigy.net>
Message-ID: <7Vnra.190$837.164@newssvr19.news.prodigy.com>
Source record: 35877

Can anyone give me the DigiKey or Mouser catalog number, or some other source, for the 4 pin screw on mic. connector that plugs into the Drake TR-7 front panel mic. connector?

Thanks for any help that you can give me.

73, Steve
WB6RIB

3125. Looking for a MM5840N

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 07:44:13 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <b8lagn$hm2@newton.cc.rl.ac.uk>
Source record: 35878

An MM5840N is an IC LED driver. In my case, it is a failed part in an SGC230
ATU.
I am trying to find a spare, but this part is obsolete.

Mike

3126. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 08:37:49 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EAE39DD.5010609@wanadoo.fr>
Source record: 35879

Hi Tom ,
after these good considerations , i choose , r2/t2 , and a homebrew
converter , not a kit .
i am also working english (us) langage , school is a long passed time (
30 years ago) , 1970 ...
i am 49 old ... 3 children ...
a lot of work in house , radio , boss , ... ouf , ouf ....
73's
Serge , Montpellier , south of France

3127. Need any programming info on UNIDEN FTU handhelds (UHF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 10:48:12 UTC
From: ukapi <ukapi@mweb.co.za>
Message-ID: <3eae587d.0@news1.mweb.co.za>
Source record: 35880

Hi

Any info will be appreciated for the above.

For those interested in programming the Motorola MCX100 UHF radios please have a look at www.sql.net/zs6mrk

This site is not in English but the document is. Click on the button called "Projekte".

I would like to do the same for the Uniden.

Regards
Nico
ZR6AFJ

3128. [2]Need any programming info on UNIDEN FTU handhelds (UHF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 10:51:29 UTC
From: ukapi <ukapi@mweb.co.za>
Message-ID: <3eae5941.0@news1.mweb.co.za>
Source record: 35881

Hi

[Sorry had the site bolow wrong]

Any info will be appreciated for the above.

For those interested in programming the Motorola MCX100 UHF radios please have a look at www.qsl.net/zs6mrk

This site is not in English but the document is. Click on the button called "Projekte".

I would like to do the same for the Uniden.

Regards
Nico
ZR6AFJ

3129. WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 15:38:19 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <ZGILhOJrxpr+Ewrt@philstheboss.freeserve.co.uk>
Source record: 35882

I need a pair of 75 WV DC, 60'000uF electrolytic cap's.

Don't wish to use many of a lower voltage and or capacitance due to lack
of real estate.

Does anyone have these lying around and for sale at reasonable money.

Tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3130. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 16:32:51 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304290832.650c4d2d@posting.google.com>
Source record: 35884

Serge <poissondanlo@wanadoo.fr> wrote in message news:<3EAE39DD.5010609@wanadoo.fr>...
> Hi Tom ,
> after these good considerations , i choose , r2/t2 , and a homebrew
> converter , not a kit .
> i am also working english (us) langage , school is a long passed time (
> 30 years ago) , 1970 ...
> i am 49 old ... 3 children ...
> a lot of work in house , radio , boss , ... ouf , ouf ....
> 73's
> Serge , Montpellier , south of France

Hi Serge,

I'm sorry, I hope it did not sound like I was making fun of your English! I have great admiration for people who can actually communicate in languages other than their native one.

But I do think that phasing directly at 2 meters might be interesting for you, if you want to keep the whole thing very simple. In fact, if the r2/t2 design is what I think it is, can you not just do the phasing directly at 2 meters, and then not have to worry about the extra stages? Certainly one of the advantages of the phasing system is that you can easily generate the signal directly at the output frequency. That would be extremely difficult with a filter SSB system, if you want to operate on more than one frequency. And no matter what frequency you use to do the phasing generation, the quadrature hybrid could be an interesting way to generate the 90-degree RF phase shift.

Best wishes on a successful project, no matter how you decide to do it. I'm sure you will learn a lot along the way.

Cheers,
Tom

3131. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 19:41:09 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <aektavkli9dokpe0u5792de20kadnd15d7@4ax.com>
Source record: 35885

On Tue, 29 Apr 2003 10:37:49 +0200, Serge <poissondanlo@wanadoo.fr>
wrote:

>after these good considerations , i choose , r2/t2 , and a homebrew
>converter , not a kit .

I recommend the mini-R2 project. It's smaller, simpler, and a bit
easier to build. You can also achieve better opposite sideband
rejection with it. Some builders report 50 dB of opposite sideband
rejection with just a little effort at matching parts and setting
gain.

Kanga US sells kits for this project that might save you a lot of
time. It's worth a look. I'm just a satisfied customer. You can
find them at http://www.bright.net/~kanga/kanga/kk7b.htm

They also sell a board called the LM2. This was also outlined in a
QST article some time back. It is a tunable VXO with multiplier
stages to take it to 144 MHz. I'm in the process of building one now.

This kind of setup was designed to go directly to two meters. It
makes an excellent IF for microwave converters and the like.

>i am also working english (us) langage , school is a long passed time (
>30 years ago) , 1970 ...
>i am 49 old ... 3 children ...

I'm 40 and expecting my third (and last) child this June. I'm just
beginning to understand how much work raising a family is and how
little time I have to myself. It's hard work being a good daddy. It
seems to be worth it, though.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

3132. I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 20:12:38 UTC
From: Les & Claire <les19031964@hotmail.com>
Message-ID: <b8mmbi$b751n$1@ID-119725.news.dfncis.de>
Source record: 35886

OK, I give up... how do I attach a solder type BNC connector to co-ax? Is there a site with pictures to guide me through? I've just got the loose components in a little bag. main body, a washer, a rubber washer, a small pin, and a cone shaped washer all (supposedly;y) held together with a threaded collar.
Soldered the pin to centre conductor, but where the braid is attached, pinched, secured is a mystery. I've had several attempts, all successful electrically but terrible when it comes to mechanically. They just don't stay on!! Is it just me or is there an art to these bloody things!!
A search with copernic produced lots of info about the crimped version but nothing on the solder version...

Les

3133. To Bill VE3JHU & Gary N4AST

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 20:32:36 UTC
From: on4ja <wbac3361@wanadoo.be>
Message-ID: <b8m9e9$17i1t$1@sinclair.be.wanadoo.com>
Source record: 35883

Dear Bill and Gary

Your 02-03-2003 messages

Thank you very much for your appreciation on EB 104 .
I studied the feasebility and I think it could be to much for me .
Lost your e-mail .

Emile ON4JA

3134. Re: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 20:34:13 UTC
From: Bullwinkle Jones <bullwinkle_01_01@hotmail.com>
Message-ID: <9lBra.121714$dh1.3407572@news0.telusplanet.net>
Source record: 35887
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

Jeezuz! Thats one hell of a transformer!

"Mike Nowlen" <mnowlen@comcast.net> wrote in message
news:sffoav05tk2g3m8hrs23qtrb5loeu0ebtk@4ax.com...
> GENERAL ELECTRIC TF4RX02NA Power Transformer
>
> Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
> Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
> 115,120,126, and 132 Volts. Potted in military style case with
> terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.
>
> Picture at:
> http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg
>
> Very Good Condition, Tested and working.
> Two available.
> $50 each + Shipping
> Send zip code for estimate
>
> Please reply via e-mail or telephone
>
> Thanks for reading.
>
> Mike Nowlen
> mnowlen@comcast.net
>

3135. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 21:23:45 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3eaeed18$0$48889$edfadb0f@dtext02.news.tele.dk>
Source record: 35888

Hello Les

> electrically but terrible when it comes to mechanically. They just don't
> stay on!! Is it just me or is there an art to these bloody things!!

Find the installation way here

http://www.qsl.net/lc2aat/bnc.htm

Regards Max

3136. Return Loss Bridge Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-29 21:47:25 UTC
From: kg6zi@yahoo.com
Message-ID: <3f36625c.0304291347.63010a3c@posting.google.com>
Source record: 35889
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hello everyone,

I've recently come across a design for a resistive 50 ohm broadbanded RLB from Gyula Nagy, HA8ET, and am curious about a few things those with a more engineering mind might help with.

You can see it at:
http://www.pollak.sulinet.hu/elektro/hidak/bridge/how_to.htm

In particular, I'm interested in a device with a low drive requirement. The designer says the minimum drive is 100 mw with 1 watt (!) being typical. That just sounds high to me. I'd rather have a device that I can use a bench signal generator and not worry about having to develop 100 mw of drive at whatever frequency. This isn't so much of a problem in the ham bands of course, but my interests go beyond those frequencies and I'd rather not have to develop (or radiate) that much power there.

Is the limiting factor in drive level simply the sensitivity of the detector, or are there other factors at work here. The use proceedure in the above link asks the user to deliver 2.5 to 3 volts to the meter and read return loss from a precalculated table. Is is simply a matter of using a more sensitive scale (with less drive of course) and using the voltage change to loss formula? I realize there are losses in a resistive bridge design to overcome...how are these factored in to my question?

Thanks for your time...

Dennis

3137. 6AR11 Compactron Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 00:45:03 UTC
From: Buzz <!buzz@flatheadracing.com>
Message-ID: <eh6uav84uihljn2sc1r0mge3lugsvgpq8q@4ax.com>
Source record: 35890

I saw an article in a 1960' Popular Electronics magazine using a single 6AR11 Compactron as a Receiver. I have tried to search the net to find an archive for old Popular Electronics Magazines, but to no avail. Any help would be appreciated.

TNX Gary, KF9CM
Remove ! from E-Mail to contact. !buzz@flatheadracing.com

3138. Re: 6AR11 Compactron Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 00:55:07 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3EAF1E32.A6789DD2@gte.net>
Source record: 35891

Buzz wrote:

> I saw an article in a 1960' Popular Electronics magazine using a
> single 6AR11 Compactron as a Receiver. I have tried to search the net
> to find an archive for old Popular Electronics Magazines, but to no
> avail. Any help would be appreciated.
>
> TNX Gary, KF9CM
> Remove ! from E-Mail to contact. !buzz@flatheadracing.com

Try this:
http://www.jvgavila.com/compac.htm

I have built this little beauty- lots of fun.

Dale W4OP

3139. Re: Return Loss Bridge Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 00:57:14 UTC
From: k7itm@aol.com
Message-ID: <3200347.0304291657.1dedad32@posting.google.com>
Source record: 35892
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

kg6zi@yahoo.com (Dennis) wrote in message
news:<3f36625c.0304291347.63010a3c@posting.google.com>...
> Hello everyone,
>
> I've recently come across a design for a resistive 50 ohm
> broadbanded RLB from Gyula Nagy, HA8ET, and am curious about a few
> things those with a more engineering mind might help with.
>
> You can see it at:
> http://www.pollak.sulinet.hu/elektro/hidak/bridge/how_to.htm
>
> In particular, I'm interested in a device with a low drive
> requirement. The designer says the minimum drive is 100 mw with 1
> watt (!) being typical. That just sounds high to me. I'd rather have
> a device that I can use a bench signal generator and not worry about
> having to develop 100 mw of drive at whatever frequency. This isn't
> so much of a problem in the ham bands of course, but my interests go
> beyond those frequencies and I'd rather not have to develop (or
> radiate) that much power there.
>
> Is the limiting factor in drive level simply the sensitivity
> of the detector, or are there other factors at work here. The use
> proceedure in the above link asks the user to deliver 2.5 to 3 volts
> to the meter and read return loss from a precalculated table. Is is
> simply a matter of using a more sensitive scale (with less drive of
> course) and using the voltage change to loss formula? I realize there
> are losses in a resistive bridge design to overcome...how are these
> factored in to my question?

It's just a Wheatstone bridge (where the unknown may be reactive, of
course). You should be able to excite it with lower power. The limit
will be the level you can detect with the particular Schottky diode
you use. Using diodes designed for zero-bias detection work, I can
detect RF voltages down to under 100 microvolts. That takes microvolt
resolution with the meter, and at such low levels I think you'll find
it best to raise the load resistance on the diode's output circuit.
Anyway, you'll get (pretty nearly) the same output voltage for given
excitation and load SWR, no matter what the phase angle of the load
is, so you can get an idea of the excitation you'll need to supply if
you assume some minimum detectable RF level and some minimum required
SWR. So if you said you want to detect 1.01:1 SWR (which is below
what you'll be able to justify anyway...because you won't know the
impedance of your line that accurately, and the resistors you use in

the bridge won't be that accurate at HF, most likely), that would be the case if Rload = 50.5 ohms. You can work out the voltages: on the left branch, the voltage will be 0.5000 times the input voltage. On the right branch, the voltage will be 50.5/100.5 = 0.5025 times the input. So if you put in 1 volt of RF, that imbalance would give you 2.5 millivolts of RF to detect, which is plenty. In fact, you could go about 25 times lower to about 40 millivolts of RF input, and you could still detect the output. That's only about -15dBm.

BUT...the problem is that the detector is nonlinear down in that voltage range, so you need some calibration. If you have a generator with calibrated output, you can do a calibration and then always set the generator to the same level, and you should have very close to the same calibration every time. Or, you can short the bridge output port and set the generator to give the same detected output level you used to do your calibration. I'd suggest staying with a bit higher excitation power, like 0dBm or +10dBm.

Lacking anything better to do the calibration with, you should be able to use 1% SMT resistors for loads. Connect the resistor so it's right across the end of a 50-ohm line...or perhaps across something like a PC-mount SMA jack, adapted to your output port...but make sure the lead lengths are vanishingly small so as to not introduce reactance. The SMT resistors I've measured seem to be fine across the full HF range. I'd recommend a range from maybe 10 ohms to a few hundred ohms; that should give you enough to work out a calibration. (I measured some out to 6GHz, and they aren't too bad even that far, though not good enough for a calibration standard.)

Would be nice to outfit the bridge with a balun and a full-blown phase and amplitude detector, and then you can read complex impedance instead of just SWR.

Cheers,
Tom

3140. Ten-Tec Triton II Station FS or TRADE - needs some work

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 01:12:31 UTC
From: "abel5228@bellsouth.net" <w4udx@nospamjuno.com>
Message-ID: <sjFra.44594$sC.26529@fe06.atl2.webusenet.com>
Source record: 35893
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

For Sale:
Ten-Tec Triton II 100 watt HF station. In nice shape, and includes the matching power supply / speaker with built-in VOX option. Also has the CW active audio filter option in the radio. Includes photocopy manual and original hand mike. The radio receives but is weak. The front end is a common 40823 (40673) dual gate FET. I bought a new one from Mouser electronics and installed it and it did not help. I was then informed that it is a static-sensitive device. I took no precautions so I probably fried the FET. Anyway, it has the calibrator, the dial has been restrung, it has new dial lamps, and the transmit puts out around 75 to 80 watts. The power supply is fine. I am tired of fooling with it. I bought it off eBay and thought it would just need an alignment. I paid $125 plus shipping for this outfit, have put another $35 in parts (+ shipping). I will take any REASONABLE offer that minimizes my losses or would be open to trades. I am interested in QRP and finding another Yaesu FT-7, HTX-100 or maybe an HW-8 radio. Shoot me an email with an offer.... I have the original eBay picture.

I will be on vacation from May 2 to May 12th. If you email me during this time please be patient.

Thanks!
Mark W4UDX

w4udx@juno.com

3141. Re: Looking for a MM5840N

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 01:26:00 UTC
From: Robert Mozeleski <moz@ncx.com>
Message-ID: <vaucth6tnt7261@corp.supernews.com>
Source record: 35894

http://www.findchips.com/

"Mike" <m.j.willis @rl.ac.uk> wrote in message news:b8lagn$hm2@newton.cc.rl.ac.uk...
> An MM5840N is an IC LED driver. In my case, it is a failed part in an SGC230
> ATU.
> I am trying to find a spare, but this part is obsolete.
>
> Mike
>
>

3142. Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 03:18:38 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3EAF408E.75C04C3D@visi.com>
Source record: 35895

Hi gang,
I have a Toko component that I think may be an IF xfrm and some type of ceramic filter. I can't find any reference to it on the Toko web page or in an old Toko catalog I have. Can anyone ID it for me?

It is a can about 1/2" long by 1/4" wide and 1/2" tall with a pot core type slug at one end. There is the # CFZ-455C on the side.

Thanks!

Bob WB0POQ

3143. Re: Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 03:56:51 UTC
From: Tweetldee <dgmason99@att99.net>
Message-ID: <7QHra.58191$cO3.3948823@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35896

"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3EAF408E.75C04C3D@visi.com...
> Hi gang,
> I have a Toko component that I think may be an IF xfrm and some type
> of ceramic filter. I can't find any reference to it on the Toko web
> page or in an old Toko catalog I have. Can anyone ID it for me?
>
> It is a can about 1/2" long by 1/4" wide and 1/2" tall with a pot core
> type slug at one end. There is the # CFZ-455C on the side.
>
> Thanks!
>
> Bob WB0POQ
>
Bob,
I don't have an exact reference for that part, but I can tell you that it's an AM ceramic filter for a 455Khz IF strip. Can't tell it's bandwidth or impedance, but that's about all I can determine. I have a Toko catalog from 1986, and some scanned pages from a long long ago Toko catalog, but neither has that exact part in it.

Tweetldee

3144. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 04:24:13 UTC
From: w4pqwhs@aol.com
Message-ID: <20030430002413.25619.00000373@mb-m21.aol.com>
Source record: 35647

Les, contact "The Wireman" he has a web page ,I think he has a booklet showing how to install all these connectors ,coax data etc.. W4PQW

3145. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 06:01:31 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <pamuavktodlrb5102q34glpr9l0sdmah3n@4ax.com>
Source record: 35648

On 28 Apr 2003 20:55:00 -0700, k7itm@aol.com (Tom Bruhns) wrote:

>I assumed you'd want to do it directly at 144MHz; otherwise, why talk
>about 2m? If you do the generation and detection at an IF frequency,
>then the RF part is just mixing and linear amplification.

If you have a reasonable way of generating and detecting the SSB signal at the final frequency, why convert the signal with a large dynamic range and large number of signals to other frequencies. It is much easier to multiply, translate and filter a constant amplitude single frequency local oscillator signal chain to the desired operating frequency.

At VHF/UHF an opposite sideband rejection of 40-50 dB is often more than enough, since on receive you are usually interested in attenuating the opposite sideband noise (to get a 3 dB increase in S/N), while on HF, a quite good opposite sideband suppression is often required to attenuate strong unwanted transmissions.

Of course there are problems with the gain distribution and stability and the 1/f noise at low audio frequencies in the receiver audio preamplifier.

If some digital signal processing is available, why not operate the I/Q demodulator as an image rejection mixer feeding the wanted signal around say 10 kHz, in which case the 1/f noise has been reduced and the gain distribution is more even and with two digital channels, also handle the 90 degree audio phase shift using Hilbert transforms.

It seems that a lot of commercial products up to at least 2.5 GHz are currently built around various "zero-IF" approaches, just wondering, why this approach has not been more popular in various amateur devices at least in VHF/UHF. For HF the signal handling/dynamic range specifications might not be good enough.

Paul OH3LWR

3146. Re: Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 06:43:19 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <bgKra.131561$ja4.5813019@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35649

I would agree that it is an integrated I.F. transformer/ceramic filter. In my infinite wisdom, when I got the current Toko databook, I threw out the old one that used to have that filter. The old Johnson solid state CB radios, such as the
Model 123A used that filter. I would almost bet that it has a yellow core.....maybe not. I better not bet. It probably has a +/- 3kHz bandwidth (AM).

Pete

Tweetldee <dgmason99@att99.net> wrote in message
news:7QHra.58191$cO3.3948823@bgtnsc04-news.ops.worldnet.att.net...
>
> "Bob Liesenfeld" <wb0poq@visi.com> wrote in message
> news:3EAF408E.75C04C3D@visi.com...
> > Hi gang,
> > I have a Toko component that I think may be an IF xfrm and some type
> > of ceramic filter. I can't find any reference to it on the Toko web
> > page or in an old Toko catalog I have. Can anyone ID it for me?
> >
> > It is a can about 1/2" long by 1/4" wide and 1/2" tall with a pot core
> > type slug at one end. There is the # CFZ-455C on the side.
> >
> > Thanks!
> >
> > Bob WB0POQ
> >
> Bob,
> I don't have an exact reference for that part, but I can tell you that
it's
> an AM ceramic filter for a 455Khz IF strip. Can't tell it's bandwidth or
> impedance, but that's about all I can determine. I have a Toko catalog
from
> 1986, and some scanned pages from a long long ago Toko catalog, but
neither
> has that exact part in it.
>
> Tweetldee
>
>

3147. Re: Topband Crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 06:47:07 UTC
From: Joe Pritchard <joe.pritchard@btclick.com>
Message-ID: <b8nrhbdtj1@sparta.btinternet.com>
Source record: 35650

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:PNOpa.190$UU4.163@newsfep1-gui.server.ntli.net...
> Wanted: At least 6 crystals all on the same fequency
> between 1.910MHz and 1.980MHz for a group of UK amateurs wishing to build
> experimental transmitters for the
> 160m band.

Hi Duncan,

Unless there is soem sort of external requirement, is there any reason why you couldn't use a straight forward LC oscillator of a suitable stable design?

That way you'd have the ability to shift around a bit in frequency. If you keep the span of the tuned circuit small, there shouldn't be many 'netting' issues. I guess costs might be an issue for the tuning caps, though....:-(

3148. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 08:42:22 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0304300042.70909ce7@posting.google.com>
Source record: 35651

w4pqwhs@aol.com (W4pqw HS) wrote in message
news:<20030430002413.25619.00000373@mb-m21.aol.com>...
> Les, contact "The Wireman" he has a web page ,I think he has a booklet showing
> how to install all these connectors ,coax data etc.. W4PQW

Get hold of a copy of "The ARRL Handbook" - virtually any edition
will have this data, and all sorts of other connectors as well. A
really good book to have - if you only ever buy ONE radio book, this
is it.

Regards,
Andrew VK3BFA

3149. Re: 2m SSB phasing , idea ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 08:53:08 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EAF8EF4.5090208@wanadoo.fr>
Source record: 35652

Hi , Tom ,
Englih langage is not very difficult to learn , it is a universal
langage , in China, Tawain, Japon , ..
they learn english langage like second language , French itoo.
I think this due to old circum naigators like Cook , Marco Polo, Spanish
, Portuguese etc ...
This is a great luke , many people can speak with facility ....
There is esperanto but it is not well known by majority .
about TX 144 : look at this web link and speak about it around you , it
has a very good sound , very good stability (xtal rocks) , and i know
this friend , it live in Nantes (France) :

http://perso.wanadoo.fr/jacques.legoff/kits.htm
(transceiver 144 Mhz) with xtal filter homebrew .
each xtal (8,xxx MHz) about 25 dollars US + shipping
each band is 200 KHz , so we can heard 144,000 to 144,xx with x xtals
the vfo is a VXO
the others parts are not expensives , some neosid filters , etc .....
i have seen and heard it in working and this is a very good job for a
homebrewer .
some Franch OM have very good web site , look at :
http://perso.wanadoo.fr/f5cau/
i know many others web links like this
Good luke
Serge /f5jtm
i don't speaking today with a phasing exiter , because i have take a big
head about this , and i need some holidays for ....
the web site of K0JD is a good start .
73's
Serge

3150. High Voltage Filter Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 09:22:07 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <vav5e52fbaf63@corp.supernews.com>
Source record: 35653

I have 9 1300 ufd @ 450vdc/520 vdc surge filter capacitors for an amplifier power supply along with a 225 watt 50 ohm resistor for surge and a heavy duty relay rated at 25 amps at 240vac with a 24vdc coil. The caps were pulled from working equipment some time ago and a few of the caps have some slight dents in them from storage ,but they should be fine. These caps are 3" diameter and 4" tall. You can see a couple of pictures of them along with other parts at this site: http://photos.yahoo.com/rob34115 and click on Robs`s photos. I will take $35 plus shipping for them. Rob WB8VWI

3151. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 09:25:47 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <hi5vavkj2ta0hs0lsr689cd3n33rj1e6jp@4ax.com>
Source record: 35654

Use crimp on's.

Much much better !

Never come unscrewed, never seem to drop off.

Clive

3152. Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 10:46:25 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BAD521C0.17F9A%stewart@say.net>
Source record: 35655
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF at the moment because of my license class, but will probably also want to build an HF radio sometime down the road.

And, while I can actually tell the difference between a resister and a battery, I am clearly not an expert at electronics. So this project will also serve as a learning experience for me.

Given the above, can you recommend a good book, again oriented towards the beginner, on home brewing a VHF SSB radio?

Your suggestions are truly appreciated.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

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3153. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 12:38:56 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <b8og61qnc1@ctb-nnrp2.saix.net>
Source record: 35656
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

If you are really as raw a beginner as you claim - perhaps you should
consider a kit?
The good ol' guys from MFJ come to mind. No gee wizz performance but not a
heap of junk either - Also very reasonably priced.

73
Roger ZR3RC

"Dwight Stewart" <stewart@say.net> wrote in message
news:BAD521C0.17F9A%stewart@say.net...
>
> I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
> at the moment because of my license class, but will probably also want to
> build an HF radio sometime down the road.
>
> And, while I can actually tell the difference between a resister and a
> battery, I am clearly not an expert at electronics. So this project will
> also serve as a learning experience for me.
>
> Given the above, can you recommend a good book, again oriented towards
the
> beginner, on home brewing a VHF SSB radio?
>
> Your suggestions are truly appreciated.
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>
>
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3154. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 12:51:58 UTC
From: Mark Florkowski <mdflorkowski@earthlink.net>
Message-ID: <OFPra.46636$ey1.4360884@newsread1.prod.itd.earthlink.net>
Source record: 35657
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

Hi,
Try looking at the Ten-Tec line of products they have radios,transverters
(converts 2M to 6M any mode).
Most of what Ten-Tec sells is kits .
73's
Mark
KC8BFP
"Roger Conroy" <rogerconroy@nospam.hotmail.com> wrote in message
news:b8og61qnc1@ctb-nnrp2.saix.net...
> If you are really as raw a beginner as you claim - perhaps you should
> consider a kit?
> The good ol' guys from MFJ come to mind. No gee wizz performance but not a
> heap of junk either - Also very reasonably priced.
>
> 73
> Roger ZR3RC
>
>
> "Dwight Stewart" <stewart@say.net> wrote in message
> news:BAD521C0.17F9A%stewart@say.net...
> >
> > I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on
VHF
> > at the moment because of my license class, but will probably also want
to
> > build an HF radio sometime down the road.
> >
> > And, while I can actually tell the difference between a resister and a
> > battery, I am clearly not an expert at electronics. So this project will
> > also serve as a learning experience for me.
> >
> > Given the above, can you recommend a good book, again oriented towards
> the
> > beginner, on home brewing a VHF SSB radio?
> >
> > Your suggestions are truly appreciated.
> >
> >
> > Dwight Stewart (W5NET)
> >
> > http://www.qsl.net/w5net/
> >
> >

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> =-----
>
>
>
>

3155. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 13:01:03 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3EAFC853.4307F2FC@gte.net>
Source record: 35658
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

Dwight Stewart wrote:

> I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
> at the moment because of my license class, but will probably also want to
> build an HF radio sometime down the road.
>
> And, while I can actually tell the difference between a resister and a
> battery, I am clearly not an expert at electronics. So this project will
> also serve as a learning experience for me.
>
> Given the above, can you recommend a good book, again oriented towards the
> beginner, on home brewing a VHF SSB radio?
>
> Your suggestions are truly appreciated.
>
> Dwight Stewart (W5NET)
>

Hi Dwight,
Unless you already have a LARGE amount of RF design knowledge, homebrewing an SSB rig (and VHF at that) is not feasable. Look at Hand Products- they make a 6M SSB kit- even these will require good soldering skills and good tools.
Dale W4OP

3156. McMurdo Silver Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 13:23:48 UTC
From: w4pqwhs@aol.com
Message-ID: <20030430092348.25570.00000328@mb-m23.aol.com>
Source record: 35659

Looking for a schematic for the McMurdo Silver mod. 803 Receiver built in 1947..any leads appreciated .thanks W4PQW

3157. Re: Return Loss Bridge Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 14:29:00 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <b8omjcbjo1@freenet9.carleton.ca>
Source record: 35660

Dennis (kg6zi@yahoo.com) writes:
>
> In particular, I'm interested in a device with a low drive
> requirement. The designer says the minimum drive is 100 mw with 1
> watt (!) being typical. That just sounds high to me. I'd rather have
> a device that I can use a bench signal generator and not worry about
> having to develop 100 mw of drive at whatever frequency. This isn't
> so much of a problem in the ham bands of course, but my interests go

Hi Dennis;

I built the RLB that W1GHZ described in QEX and it works fine on
2.4 GHz with <15mW of drive. I have some extra 50 SMA termination
resistors if you need some...

Russ in FN25fl
--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

3158. Re: Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 16:00:13 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3EAFF30D.B5AAFE5B@neicoltech.org>
Source record: 35661

Pete KE9OA wrote:

> I would almost bet that it has a yellow
> core.....maybe not. I better not bet.

Safe bet. It does. :)

Bob L.

3159. Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 16:52:14 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <2bTra.1416$IU2.2050495@kent.svc.tds.net>
Source record: 35662

Hi All,
Is there anyway other than re-programming EPROM'S to make two devices communicate serially when one device is 4800, 8, N, 1 stop bit and the other is 4800, 8, N, 2 stop bits?

Neither micro that controls the devices can be re-programmed so both are stuck 1 vs. 2 stop bits. Is there a hardware or some other type of conversion I can try to get the two pieces of equipment to communicate?

Thanks,
Jeff

3160. old Signetics chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 16:56:23 UTC
From: bertsch.3@osu.edu
Message-ID: <b8ov7n$5dd$1@layla.net.ohio-state.edu>
Source record: 35663
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I've got an old (nixie tube!) hp counter. The 10MHz clock board has a 14 pin dip with a Signetics logo and the part number N1004A. I do know it's TTL, or at least uses TTL levels.

Can anyone cross reference that for me?

Thanks,
Steve

3161. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 18:52:05 UTC
From: john graesser <graesser@tca.net>
Message-ID: <vb06q671rlvhc1@corp.supernews.com>
Source record: 35664

"Jeff Weinberg W8CQ" <w8cqjeff@tds.net> wrote in message
news:2bTra.1416$IU2.2050495@kent.svc.tds.net...
> Hi All,
> Is there anyway other than re-programming EPROM'S to make two devices
> communicate serially when one device is 4800, 8, N, 1 stop bit and the
other
> is 4800, 8, N, 2 stop bits?
>
> Neither micro that controls the devices can be re-programmed so both are
> stuck 1 vs. 2 stop bits. Is there a hardware or some other type of
> conversion I can try to get the two pieces of equipment to communicate?
>
> Thanks,
> Jeff

If the 2 stop bits device is the only one transmitting then the other can handle the bit stream, you just lose time since it will ignore the extra stop bit, async communications will ignore extra bit times.

Is this hookup just for a short time, to swap programming or files? A simple short term fix would be to hook them up to a comp with 2 free serial ports and then use software to link the two ports. An even more expensive method would be to network two comps together and then hook the devices up to to a computer each, since that only requires one free serial port per comp.

Back in the old days of uarts you could sometimes snip a pin and pull it up or down to select word length etc, but with the advent of vlsi all that is kept in internal registers now.
thanks, John.
KC5DWD

3162. Re: 6AR11 Compactron Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 18:56:35 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0304301056.1e9f1ebe@posting.google.com>
Source record: 35665

Buzz <!buzz@flatheadracing.com> wrote in message
news:<eh6uav84uihljn2sc1r0mge3lugsvgpq8q@4ax.com>...
> I saw an article in a 1960' Popular Electronics magazine using a
> single 6AR11 Compactron as a Receiver. I have tried to search the net
> to find an archive for old Popular Electronics Magazines, but to no
> avail. Any help would be appreciated.
>
> TNX Gary, KF9CM
> Remove ! from E-Mail to contact. !buzz@flatheadracing.com

Are you sure it was a 6AR11? That's a dual semiremote-cutoff pentode.
Not a tube I'd really expect to see used in a single-tube receiver.
The radio that the other reply linked to uses a 6AF11
(dual-triode+pentode). Probably a good chance that was what you saw.

73,
Mike, KK6GM

3163. Denco coils.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 20:18:09 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <b8pb21$1lh$1@sparta.btinternet.com>
Source record: 35666

I am trying to build an old receiver that I once had when I was very much younger, a HAC DX2 regen valve RX. I have sourced most components. Does anyone know where I could obtain Denco coils (green) and a L210 triode valve from here in the UK.

Regards Simon G7CPN.

3164. Re: old Signetics chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 20:19:56 UTC
From: dunnt@its.caltech.edu
Message-ID: <dunnt-3004031319560001@dhcp-40-131.caltech.edu>
Source record: 35667
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

In article <b8ov7n$5dd$1@layla.net.ohio-state.edu>, bertsch.3@osu.edu wrote:

>I've got an old (nixie tube!) hp counter. The 10MHz clock board has
>a 14 pin dip with a Signetics logo and the part number N1004A. I do
>know it's TTL, or at least uses TTL levels.
>
>Can anyone cross reference that for me?
>
>Thanks,
>Steve

Signetics 1974 data book list the N1004A as an ECL II series, dual 4 input
gate. It also states it is equivalent to Motorola MC1004P. Inputs on
1,2,3,4 and out put on pin 6 and compliment output on 5. other half is
10,11,12,13 input and out on 8, compliment out on 9. Tom WB6IQD

3165. Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 20:24:14 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <b8pbdfjjs1@newsg3.svr.pol.co.uk>
Source record: 35668

Hi All,

I want to build a homebrew balanced (Dual L)
ATU for my full wave loop antenna.

Does anyone have any information on constructing
a balun using RG58 coax ?

I saw a picture of a balanced ATU once that used
a balun made from RG58 turns on a former, however
I've no idea on the diameter or length of the former
nor the number of turns required, can anyone help
please ?

Many thanks !

MikeT ...
M0AWS

3166. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 20:57:38 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <6NWra.1441$IU2.2103200@kent.svc.tds.net>
Source record: 35669

Hi John,
Thanks for the reply. The one transmitting is the 1 stop bit device, and the receiver is the 2 stop bit device, unfortunately. They are also hooked together all the time for remote control.

Thanks for your thoughts.

Jeff

"john graesser" <graesser@tca.net> wrote in message
news:vb06q671rlvhc1@corp.supernews.com...
>
> "Jeff Weinberg W8CQ" <w8cqjeff@tds.net> wrote in message
> news:2bTra.1416$IU2.2050495@kent.svc.tds.net...
> > Hi All,
> > Is there anyway other than re-programming EPROM'S to make two devices
> > communicate serially when one device is 4800, 8, N, 1 stop bit and the
> other
> > is 4800, 8, N, 2 stop bits?
> >
> > Neither micro that controls the devices can be re-programmed so both are
> > stuck 1 vs. 2 stop bits. Is there a hardware or some other type of
> > conversion I can try to get the two pieces of equipment to communicate?
> >
> > Thanks,
> > Jeff
>
> If the 2 stop bits device is the only one transmitting then the other can
> handle the bit stream, you just lose time since it will ignore the extra
> stop bit, async communications will ignore extra bit times.
>
> Is this hookup just for a short time, to swap programming or files? A
simple
> short term fix would be to hook them up to a comp with 2 free serial ports
> and then use software to link the two ports. An even more expensive method
> would be to network two comps together and then hook the devices up to to
a
> computer each, since that only requires one free serial port per comp.
>
> Back in the old days of uarts you could sometimes snip a pin and pull it
up
> or down to select word length etc, but with the advent of vlsi all that is
> kept in internal registers now.

> thanks, John.
> KC5DWD
>
>

3167. Re: Denco coils.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 21:02:02 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3eb03980$0$48895$edfadb0f@dtext02.news.tele.dk>
Source record: 35670

Hell Simon

> I am trying to build an old receiver that I once had when I was very much
> younger, a HAC DX2 regen valve RX. I have sourced most components. Does
> anyone know where I could obtain Denco coils (green) and a L210 triode
valve
> from here in the UK.

The Denco coils is not made anymore, the only place I have seen them sold
lately is on E-Bay to very high prices. Here you can find instructions on
how
to make your own.

http://www.hanssummers.com/radio/transistor/intro.htm

You might be able to get the L210 from http://www.6v6.co.uk

Regards Max

3168. Re: Transverter HF to 2M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 22:17:12 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EB04B5B.A21C4389@bellatlantic.net>
Source record: 35671

D & B Rude wrote:
>
> Hello,
> I would like to either buy or build a transverter for my FT-840 so I could
> run all mode on 2 meters. Wouldn't mind one for 6 meters either, but am
> really really interested in one for hf to 2. Any help, schematics, info, new
> used, etc., greatly appreciated.
> Dave
> KA9SRU

Ten-Tec makes kits for that.

As a side note, the 20M -> 6M transverter kit
can be easily modified for 10M -> 6M for those who
have a 10M only all mode xceiver. Those 10M all mode
xceiver were popular a while back, and you can find
them at hamfests sometimes. I got one for $50.00
broken (a bad electrolytic cap in the audio amp) but
they usually sell for about $100 - $150. Works
great with the modified Ten-Tec kit.

3169. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 22:31:13 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EB04EA4.294406DE@bellatlantic.net>
Source record: 35672

Philip de Cadenet wrote:
>
> I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
>
> Don't wish to use many of a lower voltage and or capacitance due to lack
> of real estate.
>
> Does anyone have these lying around and for sale at reasonable money.
>
> Tnx
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

I don't know how much real estate you have - but BG Micro
sells a 50 v 68,000uF cap - if you can go with 34,000uF,
put 2 in series. These caps measure 3.5" tall by 2.5" dia.
and cost $4.95 each. I know you don't want to go with
multiple caps, but my guess is 60,000 at 75V is going to be
hard to find.

3170. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 22:53:43 UTC
From: averyfineman@aol.com
Message-ID: <20030430185343.18771.00000266@mb-m18.aol.com>
Source record: 35673

In article <BAD521C0.17F9A%stewart@say.net>, Dwight Stewart <stewart@say.net>
writes:

> I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
>at the moment because of my license class, but will probably also want to
>build an HF radio sometime down the road.
>
> And, while I can actually tell the difference between a resister and a
>battery, I am clearly not an expert at electronics. So this project will
>also serve as a learning experience for me.
>
> Given the above, can you recommend a good book, again oriented towards the
>beginner, on home brewing a VHF SSB radio?
>
> Your suggestions are truly appreciated.

3171. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 23:56:56 UTC
From: averyfineman@aol.com
Message-ID: <20030430195656.08129.00000394@mb-m01.aol.com>
Source record: 35674

In article <BAD521C0.17F9A%stewart@say.net>, Dwight Stewart <stewart@say.net>
writes:

> I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
>at the moment because of my license class, but will probably also want to
>build an HF radio sometime down the road.

In terms of home workshop resources, the HF range radio will
be a better starting place.

You need to define "radio" just a bit narrower. Receiver?
Transmitter? Transceiver? Converter?

> And, while I can actually tell the difference between a resister and a
>battery, I am clearly not an expert at electronics. So this project will
>also serve as a learning experience for me.

No one has to be an "expert" at electronics to do such homebrewing
but you must differentiate between true design, copying some article
from a magazine or book, or kit building. One DOES need to have
certain resources available in the home workshop (or someplace) for
any of the three levels: A reasonably accurate RF signal source for
receivers covering VHF; a reasonably accurate RF power output
measurement means for transmitters, also covering VHF.

For "learning experience," do what other suggest. Begin with a kit.
Kits have the advantage of someone else already doing the design
and proving the device can function close to what is advertised. If
instructions are followed explicitly, you will gain familiarization
with VHF techniques that are much more necessary than with
corresponding-function HF-range radios. Using supplied PCBs
there will be little difference between the original much-tested
design and final kit product, avoiding excess lead length and
excess lead inductance.

There are many different kits advertised in QST, QEX, CQ, and 73
for USA "learning experiencers." A web search will turn up most
of those. Communications Concepts has kits for solid-state
transmitters, essential components or full kits. Communications
Concepts had some VHF range transmitter kits but I haven't
checked to see if they still carry them.

> Given the above, can you recommend a good book, again oriented towards the
>beginner, on home brewing a VHF SSB radio?

Why SSB in particular? SSB at VHF is not for "beginners." Your
resources should include a reasonably accurate frequency

counter to insure you are operating stably and within band, both for the receiver and transmitter. SSB homebrewing needs some way to check modulation quality and make certain that transmitter modulation doesn't splatter out away from normal bandwidth.

Concentrating on solid-state amplifiers, a whole series of Motorola Application Notes done by Helge Granberg of Motorola forms an essential learning "book" that explains their particular techniques in great deal, including construction. Communications Concepts has/had some of those AppNotes available free on their website (pdf quality not as good as what was available direct from Motorola). Those amplifier AppNotes started appearing around the mid-1970s and continued for roughly a decade. Some were reissued with the same information at later dates.

You can find all sorts of amateur VHF projects in amateur radio publications in English, both here (principally from ARRL) and from RSGB. The one thing you MUST remember on copying those projects is complete attention to detail on all parts...at VHF and UHF all passive components have significant parts of parasitic resistance, capacitance, and inductance. Active devices have specific input-output impedance/admittance characteristics which were probably taken into account by the designers. You can't blithely swap another unfamiliar part number solid-state device for the one specified unless you KNOW what the substitute has and can do.

Kit building using supplied kit parts is the first step for learning VHF to UHF techniques. Chances for success are better there than starting off knowing just some differences between "resisters" and batteries. Jumping the gun to the next plateau of experience-knowledge is overly ambitious unless you want to spend (literally) years of your own time in self-learning needed to make your own design from scratch.

> Your suggestions are truly appreciated.

You may not like my suggestions. A common tendency is to look at some finished production-line product and say "I can do that" without thinking things through carefully. That finished manufactured product represents hundreds of hours of design and development time by many people who have "been there, done that" in going through their learning experiences. The same applies to some author's construction project, the author also with some "learning experience" over a long time. What you don't see are a LOT of construction projects that failed to perform and thus never got any write-ups.

Over-confidence is an easy attitude to adopt. After the first few failures you learn what doesn't work, at least in the way you did it. Self-education is necessary to learn what exists in the real project but was cut from the construction article, how to test something,

what you need for testing and development work. Eventually you get to real personal confidence after some successes. That point is the beginning of being able to truly homebrew something of your own...and to recognize what is practical to do and what isn't practical.

Len Anderson
retired (from regular hours) electronic engineer person

3172. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 23:57:37 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EB062E3.8F47ED66@bellatlantic.net>
Source record: 35675
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

Dale Parfitt wrote:

> >
>
> Hi Dwight,
> Unless you already have a LARGE amount of RF design knowledge, homebrewing an SSB
> rig (and VHF at that) is not feasable. Look at Hand Products- they make a 6M SSB
> kit- even these will require good soldering skills and good tools.
> Dale W4OP

Got a link or address for Hand Products?

3173. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-04-30 23:58:39 UTC
From: hexter@blazenet.net
Message-ID: <vb0opfhvahrof8@corp.supernews.com>
Source record: 35676

In article <2bTra.1416$IU2.2050495@kent.svc.tds.net>, w8cqjeff@tds.net says...
>
>Hi All,
>Is there anyway other than re-programming EPROM'S to make two devices
>communicate serially when one device is 4800, 8, N, 1 stop bit and the other
>is 4800, 8, N, 2 stop bits?
>
>Neither micro that controls the devices can be re-programmed so both are
>stuck 1 vs. 2 stop bits. Is there a hardware or some other type of
>conversion I can try to get the two pieces of equipment to communicate?
>
>Thanks,
>Jeff
>
If you connect the hardware handshaking lines, it may work, even though
the stop bits are not matched. One will not transmit until the other is
ready, and you will avoid the over-run problem when the '1stop' is talking
to the '2stop'. When the '2stop' talks to the '1stop' you should have no
problem other than a very slightly slower throughput, as you are idleing
during the extra stop bit.

Now, if it is a real problem for you, and you just can't get it to behave,
then perhaps you could build 2 back to back UART chips set with a 16X clock
input from a 555 timer, or a real clock generator, and set the hardware UARTS
to the desired data bits, and stop bits. I have done this back to back thing
several times. The chip I seem to remember using was something like AY-1013,
or perhaps AY-5-1013. It has been a few years, so I am a bit fuzzy on the
part number. I used them to convert 7 bit data streams into 8 bit, and back.

Best luck.

3174. Re: Ten-Tec Triton II Station FS or TRADE - needs some work

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 00:29:54 UTC
From: "abel5228@bellsouth.net" <w4udx@nospamjuno.com>
Message-ID: <ILZra.44928$P%6.22473@fe03.atl2.webusenet.com>
Source record: 35677
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

SOLD...THANKS FOR ALL THE INTEREST!
Mark W4UDX

"abel5228@bellsouth.net" <w4udx@nospamjuno.com> wrote in message
news:sjFra.44594$sC.26529@fe06.atl2.webusenet.com...
> For Sale:
> Ten-Tec Triton II 100 watt HF station. In nice shape, and includes the
> matching power supply / speaker with built-in VOX option. Also has the CW
> active audio filter option in the radio. Includes photocopy manual and
> original hand mike. The radio receives but is weak. The front end is a
> common 40823 (40673) dual gate FET. I bought a new one from Mouser
> electronics and installed it and it did not help. I was then informed that
> it is a static-sensitive device. I took no precautions so I probably fried
> the FET. Anyway, it has the calibrator, the dial has been restrung, it has
> new dial lamps, and the transmit puts out around 75 to 80 watts. The power
> supply is fine. I am tired of fooling with it. I bought it off eBay and
> thought it would just need an alignment. I paid $125 plus shipping for
this
> outfit, have put another $35 in parts (+ shipping). I will take any
> REASONABLE offer that minimizes my losses or would be open to trades. I am
> interested in QRP and finding another Yaesu FT-7, HTX-100 or maybe an HW-8
> radio. Shoot me an email with an offer.... I have the original eBay
picture.
>
> I will be on vacation from May 2 to May 12th. If you email me during this
> time please be patient.
>
> Thanks!
> Mark W4UDX
>
> w4udx@juno.com
>
>
>
>
>
>
>

3175. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 00:42:45 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <C207B3F743ADA79C.9C86AEF23AB2B79D.4FFA2DA21B0159FF@lp.airnews.net>
Source record: 35678

<ehsjr@bellatlantic.net> wrote in message
news:3EB04EA4.294406DE@bellatlantic.net...
>
>
> Philip de Cadenet wrote:
> >
> > I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
> >
> > Don't wish to use many of a lower voltage and or capacitance due to lack
> > of real estate.
> >
> > Does anyone have these lying around and for sale at reasonable money.
> >
> > Tnx
> > --
> > Philip de Cadenet G4ZOW
> > Transmitters 'R' Us
> > http://www.transmittersrus.com
>
> I don't know how much real estate you have - but BG Micro
> sells a 50 v 68,000uF cap - if you can go with 34,000uF,
> put 2 in series.

Uhhh, gomer, capacitors in PARALLEL add.

3176. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 00:46:50 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <732ACDC8F61EB045.DA7C3041F205DA04.91CBF2A0B8C8347F@lp.airnews.net>
Source record: 35679

"Jeff Weinberg W8CQ" <w8cqjeff@tds.net> wrote in message
news:6NWra.1441$IU2.2103200@kent.svc.tds.net...
> Hi John,
> Thanks for the reply. The one transmitting is the 1 stop bit device, and
> the receiver is the 2 stop bit device, unfortunately. They are also
hooked
> together all the time for remote control.

Jeff, hook them up and see whether they work. They probably will.

Normally, the 2-stop-bits setting only applies to transmitted characters.
On receive, the receiver SHOULD be able to cope with just one stop bit,
unless it is doing some really flakey non-buffering stuff and burning a lot
of time before it starts listening again.

3177. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 00:54:17 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3EB07039.D859DBFF@ispwest.com>
Source record: 35681

Put a PIC between them... I have a PIC that receives 1200 bps and re-transmits the data at 300 baud. Shouldn't be too much trouble to receive 8N2 and xmit 8N2 or the other way around....

Ted in Atlanta KD4EE

Jeff Weinberg W8CQ wrote:

> Hi All,
> Is there anyway other than re-programming EPROM'S to make two devices
> communicate serially when one device is 4800, 8, N, 1 stop bit and the other
> is 4800, 8, N, 2 stop bits?
>
> Neither micro that controls the devices can be re-programmed so both are
> stuck 1 vs. 2 stop bits. Is there a hardware or some other type of
> conversion I can try to get the two pieces of equipment to communicate?
>
> Thanks,
> Jeff

3178. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 01:15:20 UTC
From: "Christopher.Cox" <Administrator@127.0.0.1>
Message-ID: <3EB074F5.3050800@127.0.0.1>
Source record: 35680

Could be why he said "series".
Problem is we do not know waht the end users operating voltage would be.
I believe the responding party had to assume that it could be above 50
volts. Of course there should be dividing resistors and the lot.

Regards

John R. Strohm wrote:
> <ehsjr@bellatlantic.net> wrote in message
> news:3EB04EA4.294406DE@bellatlantic.net...
>
>>
>>Philip de Cadenet wrote:
>>
>>>I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
>>>
>>>Don't wish to use many of a lower voltage and or capacitance due to lack
>>>of real estate.
>>>
>>>Does anyone have these lying around and for sale at reasonable money.
>>>
>>>Tnx
>>>--
>>>Philip de Cadenet G4ZOW
>>>Transmitters 'R' Us
>>>http://www.transmittersrus.com
>>
>>I don't know how much real estate you have - but BG Micro
>>sells a 50 v 68,000uF cap - if you can go with 34,000uF,
>>put 2 in series.
>
>
> Uhhh, gomer, capacitors in PARALLEL add.
>
>

3179. FA: BIRD 100E 400 - 1000 Mhz Element

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 02:35:45 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <DM%ra.5763$b67.1364143@read2.cgocable.net>
Source record: 35682
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Have the above item listed on ebay for your perusal.

http://cgi.ebay.ca/ws/eBayISAPI.dll?ViewItem&category=1502&item=3020993384&r
d=1
Thank You for looking
73...Norm

3180. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 03:10:42 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <sqGdna8Xz_p6Ei2jXTWcrg@giganews.com>
Source record: 35683

"Jan Wagner" <jwagner@cc.hut.fi> wrote in message
news:b7kbhf$7o9$1@nyytiset.pp.htv.fi...
> Hi,
>
> I've a AD9854 DDS running, but the output is very "wobbly" even
> after filtering. It runs at 200MHz (50MHz x 4). Low pass
> filtering at 50 MHz with a 3-pole C-LC. Even a 1 MHz DDS output
> the signal is very messy, with low frequency "wobble" content.
> Here are two scope traces to show what I mean:
>
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470kHz-wobble-
> 1.gif
> http://www.hut.fi/~jwagner/electr/dc-rx/scope/dds-1470khz-wobble-
> 2.gif
> (the grey area is the afterglow you'd see on a CRT scope)
>
> As the scope pics show, at 1.470 MHz the max phase noise (or,
> jitter...) is about 20ns peak-to-peak. Really horrible... The
> cheap 50MHz reference xtal oscillator which clocks the DDS is
> rock solid compared to these 20ns of jitter.
>
> Shouldn't the DDS output show much less phase noise??

I'd say that the artifacts you're seeing are in your DSO. The AD9854's spurious signals should not be visible on a time-domain instrument except possibly at a very few worst-case frequencies that you're not going to stumble upon by chance.

What happens when you look at a clean LC oscillator at the same frequency?

-- john KE5FX

3181. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 03:21:07 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3EB091E8.4443FD63@gte.net>
Source record: 35684
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

ehsjr@bellatlantic.net wrote:

> Dale Parfitt wrote:
>
> > >
> >
> > Hi Dwight,
> > Unless you already have a LARGE amount of RF design knowledge, homebrewing an SSB
> > rig (and VHF at that) is not feasable. Look at Hand Products- they make a 6M SSB
> > kit- even these will require good soldering skills and good tools.
> > Dale W4OP
>
> Got a link or address for Hand Products?

Hand no longer shows this on their site- sorry.
Kanga US was the importer- might try them and see what's up.
Dale W4OP

3182. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 03:49:22 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <E46D4B4AB8F86F57.25A8903F1E9AD6EB.394D32AA36029D61@lp.airnews.net>
Source record: 35685

Thanks. Brainfade due to something or other...

"Christopher.Cox" <Administrator@127.0.0.1> wrote in message
news:3EB074F5.3050800@127.0.0.1...
> Could be why he said "series".
> Problem is we do not know waht the end users operating voltage would be.
> I believe the responding party had to assume that it could be above 50
> volts. Of course there should be dividing resistors and the lot.
>
> Regards
>
>
> John R. Strohm wrote:
> > <ehsjr@bellatlantic.net> wrote in message
> > news:3EB04EA4.294406DE@bellatlantic.net...
> >
> >>
> >>Philip de Cadenet wrote:
> >>
> >>>I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
> >>>
> >>>Don't wish to use many of a lower voltage and or capacitance due to
lack
> >>>of real estate.
> >>>
> >>>Does anyone have these lying around and for sale at reasonable money.
> >>>
> >>>Tnx
> >>>--
> >>>Philip de Cadenet G4ZOW
> >>>Transmitters 'R' Us
> >>>http://www.transmittersrus.com
> >>
> >>I don't know how much real estate you have - but BG Micro
> >>sells a 50 v 68,000uF cap - if you can go with 34,000uF,
> >>put 2 in series.
> >
> >
> > Uhhh, gomer, capacitors in PARALLEL add.
> >
> >
>

3183. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 04:31:08 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <871xzjcmpf.fld@barrow.com>
Source record: 35686

"John R. Strohm" <strohm@airmail.net> wrote:
>"Jeff Weinberg W8CQ" <w8cqjeff@tds.net> wrote in message
>news:6NWra.1441$IU2.2103200@kent.svc.tds.net...
>> Hi John,
>> Thanks for the reply. The one transmitting is the 1 stop bit device, and
>> the receiver is the 2 stop bit device, unfortunately. They are also
>hooked
>> together all the time for remote control.
>
>Jeff, hook them up and see whether they work. They probably will.
>
>Normally, the 2-stop-bits setting only applies to transmitted characters.

It sets the character frame length for the receiver, and if that
length is not used by the transmit side the early start bits
will fall within the previous frame interval and be ignored,
causing the rest of the current frame to be garbled. The
receiver loses sync.

>On receive, the receiver SHOULD be able to cope with just one stop bit,
>unless it is doing some really flakey non-buffering stuff and burning a lot
>of time before it starts listening again.

If the receiver is set to 2 stop bits it had *better* be burning
2 bits worth of time!

Sending it a data stream with only 1 stop bit should result in a
series of framing errors, totally garbling the data output.

Actually, being 1 stop bit off is a *huge* problem! Twenty
years ago Infotron and others made various kinds of stat mux
equipment that multiplexed asynchronous serial data streams, and
these could be configured with stop bits incremented in
something like 1/8th of a stop bit. A 1/8th difference in the
receiver and transmitter was an interesting problem... it would
vary from maybe 20 to maybe 200 or more characters sent before
the receiver would lose sync. Where I saw this was on mux
equipment between Telex exchanges, so basically a very short
message might make it through, but most of them began garbling
in the first paragraph of the message body. Customers would see
just enough to know what they were missing... ;-)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3184. tube tester anyone,FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 05:23:54 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Kb2sa.133181$ja4.5923301@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35687

email for details..

--

Those who want to be successful, will find a way,
those that don't, will find an excuse!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.474 / Virus Database: 272 - Release Date: 4/18/03

3185. FA - Assorted radio / electronics items

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 07:33:58 UTC
From: Adrian <adrian@ambquality.co.uk>
Message-ID: <VA.00003d31.0018999b@ambquality.co.uk>
Source record: 35688

Hi All

The shack clearout continues!
Assorted radio / electronics items FA on Ebay - includes Plessey SL600 ICs, nice big variable caps, assorted chips & components of interest to the homebrewer.

http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=adrian5750&include=0&since=-1&sort=3&rows=25

Thanks for looking
Adrian (G0THW) - Suffolk UK

3186. FS PHILIPS PRP70 SERIES CHARGER AND BATTS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 07:41:06 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3eb1cf33.2399896@news.freeserve.co.uk>
Source record: 35689

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&category=1502&item=3021097892&rd=1

cheers

from Ron...

3187. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 07:50:13 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Vk4sa.59847$cO3.4076053@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35690
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

I don't know about that. Even I can build one of those. Seriously, if you
want to see what it takes to design a receiver, check out my website at:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
This receiver could be used up on the 6 and 2M bands, but it would be good
to add an RF stage ahead of the mixer. Also, you would need to change the
LO injection frequencies, and the input filter parameters.

Pete

Dale Parfitt <parinc@gte.net> wrote in message
news:3EAFC853.4307F2FC@gte.net...
>
>
> Dwight Stewart wrote:
>
> > I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on
VHF
> > at the moment because of my license class, but will probably also want
to
> > build an HF radio sometime down the road.
> >
> > And, while I can actually tell the difference between a resister and a
> > battery, I am clearly not an expert at electronics. So this project will
> > also serve as a learning experience for me.
> >
> > Given the above, can you recommend a good book, again oriented towards
the
> > beginner, on home brewing a VHF SSB radio?
> >
> > Your suggestions are truly appreciated.
> >
> > Dwight Stewart (W5NET)
> >
>
> Hi Dwight,
> Unless you already have a LARGE amount of RF design knowledge, homebrewing
an SSB
> rig (and VHF at that) is not feasable. Look at Hand Products- they make a
6M SSB
> kit- even these will require good soldering skills and good tools.
> Dale W4OP
>

3188. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 07:59:35 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Ht4sa.59888$cO3.4077013@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35691

That is very good advice. I remember my first dual-conversion receiver. I thought "no images anymore". You can imagine my dismay when I had only 35dB of (2 X 2nd I.F.) rejection. It turned out that radiation from the 2nd LO was creeping back into the 1st mixer, and manifesting itself in this way. It was only in desperation that I took some copper flashing and shielded the oscillator. At that point, the image disappeared, just like switching a light off. It gets even more critical at VHF/UHF ranges.
Anyway, a few other good books to get you started are the ARRL handbook, Ulrich Rohde's book on communications receiver design, and Solid State Radio Engineering. A good book on frequency synthesizers is "Frequency Synthesizers, Theory and Design.

Pete

Avery Fineman <averyfineman@aol.com> wrote in message news:20030430195656.08129.00000394@mb-m01.aol.com...
> In article <BAD521C0.17F9A%stewart@say.net>, Dwight Stewart <stewart@say.net>
> writes:
>
> > I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
> >at the moment because of my license class, but will probably also want to
> >build an HF radio sometime down the road.
>
> In terms of home workshop resources, the HF range radio will
> be a better starting place.
>
> You need to define "radio" just a bit narrower. Receiver?
> Transmitter? Transceiver? Converter?
>
> > And, while I can actually tell the difference between a resister and a
> >battery, I am clearly not an expert at electronics. So this project will
> >also serve as a learning experience for me.
>
> No one has to be an "expert" at electronics to do such homebrewing
> but you must differentiate between true design, copying some article
> from a magazine or book, or kit building. One DOES need to have
> certain resources available in the home workshop (or someplace) for
> any of the three levels: A reasonably accurate RF signal source for
> receivers covering VHF; a reasonably accurate RF power output
> measurement means for transmitters, also covering VHF.
>
> For "learning experience," do what other suggest. Begin with a kit.
> Kits have the advantage of someone else already doing the design

> and proving the device can function close to what is advertised. If
> instructions are followed explicitly, you will gain familiarization
> with VHF techniques that are much more necessary than with
> corresponding-function HF-range radios. Using supplied PCBs
> there will be little difference between the original much-tested
> design and final kit product, avoiding excess lead length and
> excess lead inductance.
>
> There are many different kits advertised in QST, QEX, CQ, and 73
> for USA "learning experiencers." A web search will turn up most
> of those. Communications Concepts has kits for solid-state
> transmitters, essential components or full kits. Communications
> Concepts had some VHF range transmitter kits but I haven't
> checked to see if they still carry them.
>
> > Given the above, can you recommend a good book, again oriented towards
the
> >beginner, on home brewing a VHF SSB radio?
>
> Why SSB in particular? SSB at VHF is not for "beginners." Your
> resources should include a reasonably accurate frequency
> counter to insure you are operating stably and within band, both
> for the receiver and transmitter. SSB homebrewing needs some
> way to check modulation quality and make certain that transmitter
> modulation doesn't splatter out away from normal bandwidth.
>
> Concentrating on solid-state amplifiers, a whole series of Motorola
> Application Notes done by Helge Granberg of Motorola forms an
> essential learning "book" that explains their particular techniques
> in great deal, including construction. Communications Concepts
> has/had some of those AppNotes available free on their website
> (pdf quality not as good as what was available direct from Motorola).
> Those amplifier AppNotes started appearing around the mid-1970s
> and continued for roughly a decade. Some were reissued with the
> same information at later dates.
>
> You can find all sorts of amateur VHF projects in amateur radio
> publications in English, both here (principally from ARRL) and
> from RSGB. The one thing you MUST remember on copying
> those projects is complete attention to detail on all parts...at VHF
> and UHF all passive components have significant parts of parasitic
> resistance, capacitance, and inductance. Active devices have
> specific input-output impedance/admittance characteristics which
> were probably taken into account by the designers. You can't
> blithely swap another unfamiliar part number solid-state device
> for the one specified unless you KNOW what the substitute has
> and can do.
>
> Kit building using supplied kit parts is the first step for learning
> VHF to UHF techniques. Chances for success are better there

> than starting off knowing just some differences between
> "resisters" and batteries. Jumping the gun to the next plateau
> of experience-knowledge is overly ambitious unless you want to
> spend (literally) years of your own time in self-learning needed
> to make your own design from scratch.
>
> > Your suggestions are truly appreciated.
>
> You may not like my suggestions. A common tendency is to look
> at some finished production-line product and say "I can do that"
> without thinking things through carefully. That finished manufactured
> product represents hundreds of hours of design and development
> time by many people who have "been there, done that" in going
> through their learning experiences. The same applies to some
> author's construction project, the author also with some "learning
> experience" over a long time. What you don't see are a LOT of
> construction projects that failed to perform and thus never got any
> write-ups.
>
> Over-confidence is an easy attitude to adopt. After the first few
> failures you learn what doesn't work, at least in the way you did it.
> Self-education is necessary to learn what exists in the real project
> but was cut from the construction article, how to test something,
> what you need for testing and development work. Eventually you
> get to real personal confidence after some successes. That point
> is the beginning of being able to truly homebrew something of your
> own...and to recognize what is practical to do and what isn't
> practical.
>
> Len Anderson
> retired (from regular hours) electronic engineer person
>
>

3189. Re: Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 08:04:02 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Sx4sa.59903$cO3.4076717@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35692

That should be a workable item. I am not sure what the input/output impedance is, though. It seems that it was used in receivers that had bipolar I.F. strips. If you can find some of the Murata CFWS-455 series of filters, or their Panasonic, TDK, or Toko equivalents, these are pretty good. They have in input/output impedance of right around 2K, which makes them great for NE602 projects.

Pete

Bob Liesenfeld <robert.liesenfeld@neicoltech.org> wrote in message news:3EAFF30D.B5AAFE5B@neicoltech.org...
>
>
> Pete KE9OA wrote:
>
> > I would almost bet that it has a yellow
> > core..............maybe not. I better not bet.
>
> Safe bet. It does. :)
>
> Bob L.
>

3190. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 08:12:07 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <BgAtoECXbNs+EwSb@philstheboss.freeserve.co.uk>
Source record: 35693

Hi Guys and thanks for the feedback.

>> >>>I need a pair of 75 WV DC, 60'000uF electrolytic cap's.

>> >>I don't know how much real estate you have - but BG Micro
>> >>sells a 50 v 68,000uF cap - if you can go with 34,000uF,
>> >>put 2 in series.
>> >
>> >
>> > Uhhh, gomer, capacitors in PARALLEL add.

I do in fact require a minimum working voltage of 75v and at least
60'000 uF.

I'd forgotten to check BG Micro.

Newark offer Vishay/Sprague 75v @ 60'000 uf but at $62.50 each, ouch.

After shipping here to the UK that would bankrupt me.

FYI they're for the PSU in a class-E AM rig.

I'll keep looking.

Tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3191. MFJ-9606 Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 09:02:21 UTC
From: Giovanni <it9xxs@kapeweb.com>
Message-ID: <xo5sa.46231$K35.1327595@news2.tin.it>
Source record: 35694
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I'm looking for the schematic diagram of the MFJ -9606 6m FM transceiver
(I've got the radio without any manual and I need to repair it).

Any help is appreciated.

Thanks !

3192. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 09:13:17 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BAD65D6C.17FCB%stewart@say.net>
Source record: 35695
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Roger Conroy" wrote:
>
> If you are really as raw a beginner as you claim -
> perhaps you should consider a kit?
> The good ol' guys from MFJ come to mind. No gee
> wizz performance but not a heap of junk either -
> Also very reasonably priced.

"Mark Florkowski" wrote:
>
> Try looking at the Ten-Tec line of products they
> have radios, transverters (converts 2M to 6M any
> mode). Most of what Ten-Tec sells is kits .

Thanks for the suggestion, both Mark and Roger. However, I've already built many kits. And while I did learn a little from those kits, it was certainly not enough to build my own VHF radio without serious guidance. There are still simply too many gaps in my knowledge about electronics. In other words, I'm still a beginner in too many areas. Because of that, the books I've seen on radio construction lose me fairly quickly. Therefore, I was hoping for a book that didn't assume so much knowledge on the part of the reader. With that, I could probably muddle my way through to a fairly basic radio.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

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3193. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 09:44:43 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BAD664CB.17FCD%stewart@say.net>
Source record: 35696

"Avery Fineman" wrote:
>
> You need to define "radio" just a bit narrower. Receiver?
> Transmitter? Transceiver? Converter?

Transceiver or receiver/transmitter pair.

> No one has to be an "expert" at electronics to do such
> homebrewing but you must differentiate between true
> design, copying some article from a magazine or book, or
> kit building. One DOES need to have certain resources
> available in the home workshop (or someplace) for any of
> the three levels: A reasonably accurate RF signal source
> for receivers covering VHF; a reasonably accurate RF
> power output measurement means for transmitters, also
> covering VHF.

Okay, perhaps I should have been more clear. Obviously, I have no desire to design a radio from scratch at this stage. I've done some kits, but was hoping to learn a little more. That leaves the book that doesn't automatically assume a certain knowledge level, yet takes one from a "beginner" level to a more complete understanding of radio construction (preferably using hands on construction of a actual radio to do so).

And, yes, in spite of taking several electronics courses, there is too much I don't understand to call myself anything other than a beginner.

That book is not as easy to find as one might expect. There are books designed for beginners that take one to a certain point with no guidance on what to do next. There are more advanced books that assume a starting knowledge level far beyond where those beginner books leave off. So, I guess what I'm really hoping for is a radio book that bridges that gap.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

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3194. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 11:21:17 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vb20pq2qbfpp8a@corp.supernews.com>
Source record: 35697

With modern day UARTs the receiver doesn't directly care how many stop bits there are. It will stay locked in the stop condition as long as the transmitted stop bit remains (1, 1.5, or 2 bit times). It is the start bit that causes the syncronization between transmitter and receiver.

3195. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 11:53:03 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <zU7sa.1556$IU2.2247254@kent.svc.tds.net>
Source record: 35698

Thanks all for the comments, but it will not work right now. The transmitting device is my repeater controller (4800, 8, N, 1) and the radio is the FT-1000D (4800, 8, N 2). The radio will not recognize commands from the controller. I have tried controlling the radio from the computer where I could change the serial port to 4800, 8, N 2 and it worked fine.

Looks like it just may not happen.

Thanks,

Jeff W8CQ

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message news:vb20pq2qbfpp8a@corp.supernews.com...
> With modern day UARTs the receiver doesn't directly care how many stop
> bits there are. It will stay locked in the stop condition as long as
> the transmitted stop bit remains (1, 1.5, or 2 bit times). It is the
> start bit that causes the syncronization between transmitter and
> receiver.
>
>

3196. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 12:56:21 UTC
From: Zack Lau <zlau@arrl.org>
Message-ID: <cQ8sa.7$y5.18390@news.ntplx.net>
Source record: 35699

"Dwight Stewart" <stewart@say.net> wrote in message takes one from a
> "beginner" level to a more complete understanding of radio construction
> (preferably using hands on construction of a actual radio to do so).
>
You might want to look at the Electronics of Radio by
David Rutledge, which is designed to teach Caltech
students how the Norcal 40A works (40M CW
transceiver). It does assume a good knowledge
of math/physics, but I think it is unreasonable to expect
a radio book to teach you everything.

Experimental Methods in RF Design by Hayward,
Campbell, and Larkin does have 6 and 2M transmitter
designs. They present the three most popular methods
of generating SSB--by filtering, phasing, and DSP.

I've written up a 2M SSB/CW transmitter and receiver for QEX,
which may be published in the next few issues. Scheduling can be difficult
to predict, especially for longer articles, as they like to use my column
to "fill out" the magazine.

73--Zack Lau W1VT

3197. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 13:05:17 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0305010505.5c346106@posting.google.com>
Source record: 35700

c.a.m@antispam.blueyonder.co.uk wrote in message
news:<hi5vavkj2ta0hs0lsr689cd3n33rj1e6jp@4ax.com>...
> Use crimp on's.
>
> Much much better !
>
> Never come unscrewed, never seem to drop off.
>
> Clive

Crimp ons are for people who never learned how to solder or follow
simple instructions!

73 de VK3BFA Andrew

3198. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 13:30:26 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <u882bv4dd38pvr5dg626s1vp7cnkrrqmmq@4ax.com>
Source record: 35701

>Crimp ons are for people who never learned how to solder or follow
>simple instructions!

I've been soldering them for years, but I still find a soldered on pin and crimped screen is better (if the leads are later used by non-techies).

Clive

3199. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 13:31:38 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <4c82bvsf42qmsi3e1n5471v7iec2dedmin@4ax.com>
Source record: 35702

Plus, putting someone down like that just because they prefer a crimp on
is kinda silly don't you think ?

Clive

3200. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:01:03 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <877k9ag40w.fld@barrow.com>
Source record: 35703

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>With modern day UARTs the receiver doesn't directly care how many stop
>bits there are. It will stay locked in the stop condition as long as
>the transmitted stop bit remains (1, 1.5, or 2 bit times). It is the
>start bit that causes the syncronization between transmitter and
>receiver.

I don't believe that is true.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3201. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:13:00 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <C41D4501329621E1.94DB8F3F5F787A13.416CD9F268A5B1F6@lp.airnews.net>
Source record: 35704
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Dwight Stewart" <stewart@say.net> wrote in message
news:BAD65D6C.17FCB%stewart@say.net...
> "Roger Conroy" wrote:
> >
> > If you are really as raw a beginner as you claim -
> > perhaps you should consider a kit?
> > The good ol' guys from MFJ come to mind. No gee
> > wizz performance but not a heap of junk either -
> > Also very reasonably priced.
>
> "Mark Florkowski" wrote:
> >
> > Try looking at the Ten-Tec line of products they
> > have radios, transverters (converts 2M to 6M any
> > mode). Most of what Ten-Tec sells is kits .
>
>
> Thanks for the suggestion, both Mark and Roger. However, I've already
> built many kits. And while I did learn a little from those kits, it was
> certainly not enough to build my own VHF radio without serious guidance.
> There are still simply too many gaps in my knowledge about electronics. In
> other words, I'm still a beginner in too many areas. Because of that, the
> books I've seen on radio construction lose me fairly quickly. Therefore, I
> was hoping for a book that didn't assume so much knowledge on the part of
> the reader. With that, I could probably muddle my way through to a fairly
> basic radio.

OK, the problem is that you have to learn to walk before you can learn to
run.

If you've built kits, then the next step is building from a schematic and
parts list. I'd suggest "W1FB's Design Notebook" by Doug DeMaw W1FB/SK, as
a good starting place. He gives several simple designs, in schematic form,
and has some good suggestions on construction practices. Also be reading
"Solid State Design for the Radio Amateur" by Doug DeMaw and Wes Hayward
(nominally out-of-print but still easily available from lots of places).

Plan on doing your earlier experimentation at HF rather than VHF. You can
get away with murder at HF and things will still work. VHF is not so
forgiving. There is a LOT of stuff to be learned before you can design your
own VHF rig.

3202. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:24:48 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <F61EB9E9030C01AE.69D530EC05ADD81D.086912C0E3DBA421@lp.airnews.net>
Source record: 35708

"Jeff Weinberg W8CQ" <w8cqjeff@tds.net> wrote in message
news:zU7sa.1556$IU2.2247254@kent.svc.tds.net...
> Thanks all for the comments, but it will not work right now. The
> transmitting device is my repeater controller (4800, 8, N, 1) and the
radio
> is the FT-1000D (4800, 8, N 2). The radio will not recognize commands
from
> the controller. I have tried controlling the radio from the computer
where
> I could change the serial port to 4800, 8, N 2 and it worked fine.
>
> Looks like it just may not happen.

It can be done, but it will get a bit ugly. You'll need a data buffer
between them, taht takes the data at 4800-8N1 and translates it to 4800-8N2.
This will require some RAM for a buffer. Check with your local ham and
computer clubs; there's bound to be at least one microcontroller nut who can
hack something up for you.

3203. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:33:34 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3eb12ff1$0$48895$edfadb0f@dtext02.news.tele.dk>
Source record: 35705

Hello

> I've been soldering them for years, but I still find a soldered on pin and
> crimped screen is better (if the leads are later used by non-techies).

But try to remove it and then put it back on.

Regards Max

3204. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:35:42 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <b3c2bvonmi8k0qoh37mufov6rd80q7o71u@4ax.com>
Source record: 35706

>But try to remove it and then put it back on.

Why bother ?

I tend to leave my leads in tact and just make new ones as needed, not exactly expensive to do so.

Clive

3205. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:40:24 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3eb1318b$0$48904$edfadb0f@dtext02.news.tele.dk>
Source record: 35707

Hello Clive

> >But try to remove it and then put it back on.
>
> Why bother ?

Because spares are newer there when they are neded most.

Regards Max

3206. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 14:50:42 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <f0d2bvcjd1fqffoabjtvk07564g7f02pph@4ax.com>
Source record: 35709

>> Why bother ?
>
>Because spares are newer there when they are neded most.

ah :)

Clive

3207. Re: 6AR11 Compactron Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 15:21:47 UTC
From: Buzz <!turtle@owc.net>
Message-ID: <q5b2bvgradtg4uvc19v0u0581k80fusb32@4ax.com>
Source record: 35710

On 30 Apr 2003 11:56:35 -0700, snarflemike@yahoo.com (Mike Silva)
wrote:

>Buzz <!buzz@flatheadracing.com> wrote in message
news:<eh6uav84uihljn2sc1r0mge3lugsvgpq8q@4ax.com>...
>> I saw an article in a 1960' Popular Electronics magazine using a
>> single 6AR11 Compactron as a Receiver. I have tried to search the net
>> to find an archive for old Popular Electronics Magazines, but to no
>> avail. Any help would be appreciated.
>>
>> TNX Gary, KF9CM
>> Remove ! from E-Mail to contact. !buzz@flatheadracing.com
>
>Are you sure it was a 6AR11? That's a dual semiremote-cutoff pentode.
> Not a tube I'd really expect to see used in a single-tube receiver.
>The radio that the other reply linked to uses a 6AF11
>(dual-triode+pentode). Probably a good chance that was what you saw.
>
>73,
>Mike, KK6GM

Your right Mike it was a 6AF11

TNX Gary KF9CM

3208. Re: I admit defeat!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 17:12:42 UTC
From: Lou <Tech@DP.NET>
Message-ID: <b8rkp9$1npc$1@news.dp.net>
Source record: 35711

"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
news:1fc7b362.0305010505.5c346106@posting.google.com...
> c.a.m@antispam.blueyonder.co.uk wrote in message
news:<hi5vavkj2ta0hs0lsr689cd3n33rj1e6jp@4ax.com>...
> > Use crimp on's.
> >
> > Much much better !
> >
> > Never come unscrewed, never seem to drop off.
> >
> > Clive
>
> Crimp ons are for people who never learned how to solder or follow
> simple instructions!
>
> 73 de VK3BFA Andrew

The newer BNCs are not "crimp - on". They are "twist-on". I've used a few - at first with hesitation as I didn't like crimp ons either. But one day, didn't have a choice. Found them to work rather well. NONE of them has given me any trouble - yet. Strip the wire as shown in "simple instructions" and twist it on. Whalah, connection made. Don't knock it until you try it. I like these especially when making up different test cables. Don't have to heat up an iron to whip a good cable together. If the cable breaks say from stress, unlike a crimp on or solder on, you just unscrew this, trim cable back, strip and reinstall. Would I trust one for a prolonged and uncertain environment? Not sure; but for all else, seem just fine. Just my opinion.
Lou/Tech@DP.NET

3209. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 17:37:36 UTC
From: Richard G Amirault <amirault@shell01.TheWorld.com>
Message-ID: <b8rm10pni2@pcls4.std.com>
Source record: 35712
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

In rec.radio.amateur.equipment Dwight Stewart <stewart@say.net> wrote:

: I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
: at the moment because of my license class, but will probably also want to
: build an HF radio sometime down the road.
(snip)
Why a SSB radio? While there is some activity on VHF SSB, it is tiny
compared to HF SSB. Aside from VHF/UHF contests a few times a year, most
VHF/UHF SSB is *very* local. If there is any activity at all in your area
it may only be one or two nights a week. Some places have virtually none.

Maybe an FM radio would be better?

Richard in Boston, MA, USA
N1JDU

3210. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 19:08:09 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <tgesa.2111$3f7.1800283@newssvr28.news.prodigy.com>
Source record: 35713
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

I concur with John completely. I'm currently at the stage where I'm designing
and building HF stuff and scratching my head when it doesn't do what *I* think
it should be doing. It's humbling, to say the least. The Radio Amateur's
Handbook and Solid State Design for the Radio Amateur are two must-have books.

My suggestion is to get a copy of LTSpice from Linear Technology - http://www.linear-tech.com/software/. The price is right. ;-) I like to design
a stage, simulate it, and then mock it up and see how far off I am. Then I try my hand at tweaking to get closer to the simulation. I'm looking forward
to designing VHF, UHF, and microwave hardware, but I'm definitely not there, yet.

- Bruce

"John R. Strohm" <strohm@airmail.net> wrote in message news:C41D4501329621E1.94DB8F3F5F787A13.416CD9F268A5B1F6@lp.airnews.net...
>
> OK, the problem is that you have to learn to walk before you can learn to
> run.
>
> If you've built kits, then the next step is building from a schematic and
> parts list. I'd suggest "W1FB's Design Notebook" by Doug DeMaw W1FB/SK, as
> a good starting place. He gives several simple designs, in schematic form,
> and has some good suggestions on construction practices. Also be reading
> "Solid State Design for the Radio Amateur" by Doug DeMaw and Wes Hayward
> (nominally out-of-print but still easily available from lots of places).
>
> Plan on doing your earlier experimentation at HF rather than VHF. You can
> get away with murder at HF and things will still work. VHF is not so
> forgiving. There is a LOT of stuff to be learned before you can design your
> own VHF rig.
>
>

3211. Need some info on the Kenwood TS-520

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 20:47:58 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EB187FE.2010605@hotmail.com>
Source record: 35714

I'd like to try and build a transverter for it, but I need some info first. I know the rig has xvert in/out jacks on the back, what frequency do they use? how much power does the xvert out jack output? How do I tell the rig that it has a transverter attached so it doesn't use the regular antenna? The rig's manual doesn't say any of these things. Thanks.

73,
Alex
VE3LEG

3212. Build your own MCM ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 21:44:52 UTC
From: jgboyles@aol.com
Message-ID: <20030501174452.19129.00000435@mb-m01.aol.com>
Source record: 35715

Hi, has anyone built the doubly balanced mixer described in this QST article? How well did it work? The article appeared in June 1987 QST p. 30, and was re-printed in 1990 in "QRP Classics" p. 45.. Don't have the QST, but have QRP classics.
There is an error in Figure 2, Fig. 2(A) the schematic and Fig.2(b) physical wiring do not agree. Transformer T1 is wired incorrect in the physical drawing. I was going by the physical drawing when I built mine and could not get it to work. I found the problem, but that was as far as I got. Before I dive back in, I would like to know whether it is worth my time. (I got a little irritated when I found the error).
73 Gary N4AST

3213. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 22:37:21 UTC
From: averyfineman@aol.com
Message-ID: <20030501183721.18769.00000427@mb-m13.aol.com>
Source record: 35716

In article <BAD664CB.17FCD%stewart@say.net>, Dwight Stewart <stewart@say.net>
writes:

>"Avery Fineman" wrote:
>>
>> You need to define "radio" just a bit narrower. Receiver?
>> Transmitter? Transceiver? Converter?
>
> Transceiver or receiver/transmitter pair.
>
>> No one has to be an "expert" at electronics to do such
>> homebrewing but you must differentiate between true
>> design, copying some article from a magazine or book, or
>> kit building. One DOES need to have certain resources
>> available in the home workshop (or someplace) for any of
>> the three levels: A reasonably accurate RF signal source
>> for receivers covering VHF; a reasonably accurate RF
>> power output measurement means for transmitters, also
>> covering VHF.
>
> Okay, perhaps I should have been more clear. Obviously, I have no desire
>to design a radio from scratch at this stage. I've done some kits, but was
>hoping to learn a little more. That leaves the book that doesn't
>automatically assume a certain knowledge level, yet takes one from a
>"beginner" level to a more complete understanding of radio construction
>(preferably using hands on construction of a actual radio to do so).
>
> And, yes, in spite of taking several electronics courses, there is too
>much I don't understand to call myself anything other than a beginner.
>
> That book is not as easy to find as one might expect. There are books
>designed for beginners that take one to a certain point with no guidance on
>what to do next. There are more advanced books that assume a starting
>knowledge level far beyond where those beginner books leave off. So, I guess
>what I'm really hoping for is a radio book that bridges that gap.

On a self-education sort of project without actually building
something, I'll suggest one way to improve yourself with
knowledge.

First, envision a real project and then block out the different
sections of it. Set up some kind of specifications as a
guideline. Study each block and ask yourself if you are
familiar with a typical circuit in that block or not. If you
aren't familiar, that's one area for self-education.

Take each block and flesh it out to a circuit. You don't need fussy details here, just enough to present some kind of circuit that might work. Are you familiar with details within that circuit or not? If not, that's a learning area.

You keep on going like that until the whole whatever is taken down to the component value in detail.

Individual blocks might be done in several ways. Think about all the kinds you've seen done, check the books to see if there are different ways to do it and try to find out why it was done that way instead of a more familiar way.

All the blocks have to interface with one another...and so do all the smaller blocks within a larger block. Even though "interface" is an over-used word, it applies generically here. If the blocks can't work together, the whole project won't work well. Optimum power transfers always require matching of some sort. Do you understand matching? If not fully understood, that's another area for more self-learning.

Not everything in a book's schematic is fully represented at high HF, VHF and above. There are "stray" capacitances, inductances, resistances in many places that aren't on the schematic. Many of those are INSIDE semiconductors and "appear" only as notations on datasheets in complex arithmetic form. Are you familiar with complex arithmetic notation and their equivalent circuits? If not, another learning area. You MUST be familiar with it to make resonant things at VHF and above.

You might need some filters some place. Do you know how to make basic types of filters? Are there Q requirements for those components to achieve a desired response? Do you know what you need in basic stopband attenuation in those filters? Can you accurately measure the response of a filter once it is completed? Do some of the component values need trimming but others can be fixed? Could you make one with all fixed values within tolerance range? The latter condition requires some simulation with an analysis program to avoid wasting lots of hours of cut-and-try on the bench.

If some blocks require frequency shifting, do you know different mixer types? Do you know about image responses? [image rejection may dictate filter stopband requirements] Is the "conversion gain" adequate in a mixer (passive types have loss, a negative gain)? How about intermodulation distortion and intercept points and their values?

Can you outline the "gain budget" in a receiver over all stages? Are the signal levels too high in back-end stages at maximum expected signal inputs? If so, how can you compensate or avoid distortion from overdriving those stages? If you need

very low noise levels at the input, do you know the "Shannon Laws" relating noise, bandwidth, and information rate? Do you know which circuits are low-noise, which are not low-noise at input stages?

On transmitters you need to set up another "gain budget" from the final amplifier back to the beginning stages or blocks. For Class C operation that gain budget can be relatively loose but Class B or AB need more attention. Typical SSB finals need B or AB stages. What are the effects of overdriving and or distortion? How can you correct that? What circuits would yield best linearity? Do you need narrow, medium, or broad band operation in the transmitter? That choice will probably dictate the final-to-antenna matching for best signal output. Bandwidth also dictates stage-to-stage matching, tuning.

On frequency control, how far do you need to tune and at what stability? A single quartz crystal off the shelf is typically +/- 50 PPM tolerance to a given frequency. Is that close enough or do you need it tighter? [50 PPM is equal to 0.005%] Can you make do with continuous manual tuning a la VFO? Or do you need lots of "channels" at fixed intervals? [PLLs would be good for that] Do you need continuous, small-increment tuning with quartz stability? [usually calls for DDS or an involved multi-loop PLL] Will this frequency control apply to both Rx and Tx? If so, are there automatic changes of frequency between Rx and Tx due to IF offsets and such?

Do you know basic Phase Locked Loops? Can you make a typical VCO or Voltage Controlled Oscillator? A divider chain that is adjustable for IF offset and others? A phase-frequency detector? The all-important Loop Filter and its calculations? Do you have a way to check and test the frequency and stability of the final PLL?

PLLs are quite "clean" in output compared to DDS and the Fractional-N types of frequency synthesizers. The DDSs are not really beginner areas and should have some kind of spectrum analyzer available to see what the spurs are and where in frequency. If you want a DDS type, do you know how to design it for minimum spurious output and how to correct that or what such spurs might do to other blocks?

After all of the above, you've got to supply operating power to all those blocks, have to know their voltage and current requirements. Are you going to operate from AC mains or from batteries? Do you need some regulation, lots of regulation of voltage? Current regulation? Do you know the worst-case limits of the primary power source? Energy storage capability in batteries? A way to recharge the rechargeable batteries? Can you get by with series regulators or do you need "buck" or "boost" supply circuits?

Do you know how to handle filtering in power supply distribution? Can you avoid feedback or effects of any kind between blocks? Can you select the right kind of bypass capacitors for decoupling at the frequency ranges desired? Do you need high efficiency in the power supply or can you get by with lower efficiency? If powering an on-off keyed final or SSB final running B or AB, can the power supply handle rapid load swings? Will those load swings reflect as supply voltage changes to driving stages?

That's a whole potfull of questions, isn't it? Nearly all of them will apply to HF transceivers and some VHF transceivers. Each and every designer goes through similar "checklists" since they all have a relationship with the finished project.

I haven't mentioned the embedded microcontrollers so common in ready-built transceivers and receivers today. Those have their own prodigious set of questions that need answers.

You, as a designer, whether of a real project or just trying to learn how it can be done, don't need any formal education in engineering to do all of that. The information IS available in paper, lots of it on the Internet. It isn't all in one convenient place or one book. Some books DO come close. It is hardly found in "primer" form. You are going to have to contend with ordinary algebra and trigonometry to get cozy with the concepts, to understand what is going on. You must get to know complex number arithmetic (made up of ordinary algebra and trig) and how impedances/admittances have equivalent circuits at one frequency.

You do NOT need calculus, sheepskins (unless you like them in your car), formal education, extension classes at a school unless you want to hurry-up the education process at the expense of time away from what you want to do elsewhere.

There isn't a single electron, field or wave that is impressed by someone's certificates, titles, academic letters behind the name, or any human emotion. YOU have to be the student of what those electrons, fields, and waves need to make them behave. Learning that happens the same whether in a formal classroom at 2 PM or at 11 PM in the quiet of a room at home. All learning happens inside an individual's head, nowhere else.

Other than that, this theory and design stuff is straightforward. :-)

Len Anderson
retired (from regular hours) electronic engineer person

3214. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 22:50:03 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vb3959dkmjr067@corp.supernews.com>
Source record: 35717

> "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
> >With modern day UARTs the receiver doesn't directly care how many
stop
> >bits there are. It will stay locked in the stop condition as long
as
> >the transmitted stop bit remains (1, 1.5, or 2 bit times). It is
the
> >start bit that causes the syncronization between transmitter and
> >receiver.
>
> I don't believe that is true.
>
Well, I just grabbed the first data sheet I came across - The Philips SCC2691 UART. I quote "The receiver only checks for a mark condition at the center of the first stop bit". Earlier it states that only the transmitter is affected by the stop bit setting.

If you think about it, what is the difference between one stop bit followed by a constant mark (i.e. no further data) and two stop bits? Now it may be in the case of the FT1000, it is not using a standard UART chip or that there is some issue with the processor not getting back to read the UART in time unless it has the extra delay of the second stop bit. As far as most UARTs themselves are concerned it makes no difference if there is one stop bit or one-thousand.

3215. 10.5 Ghz microwave emitter source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-01 23:14:54 UTC
From: mboehler@yahoo.com
Message-ID: <516e3cef.0305011514.5ea75030@posting.google.com>
Source record: 35718

Hi. I hope someone out there can help me. I am trying to find a place to get a 10.5Ghz microwave emitter. I understand that broken radar detectors and those motion sensors found on automatic doors are great sources, but I can't seem to find any. Does anyone know of a place or places that I can find something like this? I've searched website after website and scoured the newsgroups, but am still at a loss.

Thank you very much for any info you can share.

Mark Boehler
KC8NGA

3216. Re: bird 500w elemt wanted..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 00:55:23 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1051836917.269295@auth2.dns.griffin.net.uk>
Source record: 35719
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

sorry neil needs to go lower in frequency..
"Neil" <neil@uk.nospam.com> wrote in message news:b8ao84$9to$1@rdel.co.uk...
> I have a 1Kw 144-520 Mhz Factor=10 element if you are interested.
> If it is of use then make me an offer.
> Cheers
> >
>
>

3217. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 01:35:37 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuhaceqe.fld@barrow.com>
Source record: 35720

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>> "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>> >With modern day UARTs the receiver doesn't directly care how many
>stop
>> >bits there are. It will stay locked in the stop condition as long
>as
>> >the transmitted stop bit remains (1, 1.5, or 2 bit times). It is
>the
>> >start bit that causes the syncronization between transmitter and
>> >receiver.
>>
>> I don't believe that is true.
>>
>Well, I just grabbed the first data sheet I came across - The Philips
>SCC2691 UART. I quote "The receiver only checks for a mark condition
>at the center of the first stop bit". Earlier it states that only the
>transmitter is affected by the stop bit setting.
>
>If you think about it, what is the difference between one stop bit
>followed by a constant mark (i.e. no further data) and two stop bits?
>Now it may be in the case of the FT1000, it is not using a standard
>UART chip or that there is some issue with the processor not getting
>back to read the UART in time unless it has the extra delay of the
>second stop bit. As far as most UARTs themselves are concerned it
>makes no difference if there is one stop bit or one-thousand.

OK, you have one UART which does that. Your statement was that
they *all* do it.

Personally, I think it is a design short cut, and an
abomination. :-) There is no immunity to a false start bit
occurring within the last 1 1/2 bits of the stop bit. That can
increase the error rates in the presence of noise.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3218. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 01:57:14 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vb3k44nrc808d5@corp.supernews.com>
Source record: 35721

> There is no immunity to a false start bit
> occurring within the last 1 1/2 bits of the stop bit.

The immunity to a false start bit comes from testing for the width of the start pulse. If it gets a space it delays 1/2 bit time and checks to see that it is still a space. If not, then the counter is reset to wait for another space. A noise pulse would have to be at least 1/2 bit time wide to cause a false start trigger. At least that is how it worked on the UARTs that I have written code for. I should never say all because there is always the exception - I'll stick with most :-)

3219. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 02:02:43 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87issucdh8.fld@barrow.com>
Source record: 35722

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>> There is no immunity to a false start bit
>> occurring within the last 1 1/2 bits of the stop bit.
>
>The immunity to a false start bit comes from testing for the width of

That is one method.

>the start pulse. If it gets a space it delays 1/2 bit time and checks
>to see that it is still a space. If not, then the counter is reset to

Obviously that can fail miserably if that particular UART is set to
2 stop bits.

>wait for another space. A noise pulse would have to be at least 1/2
>bit time wide to cause a false start trigger. At least that is how it
>worked on the UARTs that I have written code for. I should never say
>all because there is always the exception - I'll stick with most :-)

I'm not sure about "most".

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3220. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 02:25:29 UTC
From: xyz <w-4-i-h-k-@mindspring.com>
Message-ID: <b8skvdpbb1@slb6.atl.mindspring.net>
Source record: 35723

I can't stay out of this any longer! Floyd, what is another method for
start bit validity testing?

Also, why would the test/wait/test fail in the case of a two bit stop as you
noted below?

Dean Craft -- W4IHK

Floyd Davidson wrote in message <87issucdh8.fld@barrow.com>...
>"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>>> There is no immunity to a false start bit
>>> occurring within the last 1 1/2 bits of the stop bit.
>>
>>The immunity to a false start bit comes from testing for the width of
>
>That is one method.
>
>>the start pulse. If it gets a space it delays 1/2 bit time and checks
>>to see that it is still a space. If not, then the counter is reset to
>
>Obviously that can fail miserably if that particular UART is set to
>2 stop bits.
>
>>wait for another space. A noise pulse would have to be at least 1/2
>>bit time wide to cause a false start trigger. At least that is how it
>>worked on the UARTs that I have written code for. I should never say
>>all because there is always the exception - I'll stick with most :-)
>
>I'm not sure about "most".
>
>--
>Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3221. Re: 10.5 Ghz microwave emitter source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 02:31:32 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <b8slj5$85a$3@news.oregonstate.edu>
Source record: 35724

"Mark Boehler" <mboehler@yahoo.com> wrote in message
news:516e3cef.0305011514.5ea75030@posting.google.com...
> Hi. I hope someone out there can help me. I am trying to find a
> place to get a 10.5Ghz microwave emitter.

Check out www.shfmicro.com !

---Joel Kolstad

3222. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 02:44:11 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87el3icbk4.fld@barrow.com>
Source record: 35725

"xyz" <w-4-i-h-k-@mindspring.com> wrote:
>I can't stay out of this any longer! Floyd, what is another method for
>start bit validity testing?
>
>Also, why would the test/wait/test fail in the case of a two bit stop as you
>noted below?

You can fit at least two false start bits between the 1/2 bit
test point and the 2 bit end point of the stop signal.

They will be accepted as a start bit if the frame interval is
not timed.

>Dean Craft -- W4IHK
>
>
>Floyd Davidson wrote in message <87issucdh8.fld@barrow.com>...
>>"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
>>>> There is no immunity to a false start bit
>>>> occurring within the last 1 1/2 bits of the stop bit.
>>>
>>>The immunity to a false start bit comes from testing for the width of
>>
>>That is one method.
>>
>>>the start pulse. If it gets a space it delays 1/2 bit time and checks
>>>to see that it is still a space. If not, then the counter is reset to
>>
>>Obviously that can fail miserably if that particular UART is set to
>>2 stop bits.
>>
>>>wait for another space. A noise pulse would have to be at least 1/2
>>>bit time wide to cause a false start trigger. At least that is how it
>>>worked on the UARTs that I have written code for. I should never say
>>>all because there is always the exception - I'll stick with most :-)
>>
>>I'm not sure about "most".
>>
>>--
>>Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>>Ukpeagvik (Barrow, Alaska) floyd@barrow.com
>
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3223. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 03:18:27 UTC
From: xyz <w-4-i-h-k-@mindspring.com>
Message-ID: <b8so2b$9vj$1@slb2.atl.mindspring.net>
Source record: 35726

You did not answer the question about a second method to test the validity of a start bit.

Bit asynchronous (or isochronous) data streams do not necessarily consider a frame interval. If the condition exists wherein frame interval is to be considered, then you have a data stream that is not structured for the async or isoc bit mode.

Uncorrected bit errors can occur at anytime when forward error control is not used. The statement that "...two false start bits between the 1/2 bit test point and the 2 bit end point of the stop signal..." can just as easily be applied to bit one, bit two, bit three etc. as to the stop bit.

If in fact a two bit wide error occurs, then that is exactly what you have...a two bit error. And that happens whether you have one or two stop bits assigned. If test/wait/test detects a start bit, then in all probability you have a start bit.

Without considering special conditions wherein a two bit time interval between data words is expected, a one stop bit system will talk to a two stop bit system without error. Maybe not so in the old days when you had mechanical systems that needed 'additional' time to stabilize between data words.

Dean -- W4IHK

Floyd Davidson wrote in message <87el3icbk4.fld@barrow.com>...
>"xyz" <w-4-i-h-k-@mindspring.com> wrote:
>>I can't stay out of this any longer! Floyd, what is another method for
>>start bit validity testing?
>>
>>Also, why would the test/wait/test fail in the case of a two bit stop as
you
>>noted below?
>
>You can fit at least two false start bits between the 1/2 bit
>test point and the 2 bit end point of the stop signal.
>
>They will be accepted as a start bit if the frame interval is
>not timed.
>
>>Dean Craft -- W4IHK
>>
>>
>>Floyd Davidson wrote in message <87issucdh8.fld@barrow.com>...
>>>"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:

>>>>> There is no immunity to a false start bit
>>>>> occurring within the last 1 1/2 bits of the stop bit.
>>>>
>>>>The immunity to a false start bit comes from testing for the width of
>>>
>>>That is one method.
>>>
>>>>the start pulse. If it gets a space it delays 1/2 bit time and checks
>>>>to see that it is still a space. If not, then the counter is reset to
>>>
>>>Obviously that can fail miserably if that particular UART is set to
>>>2 stop bits.
>>>
>>>>wait for another space. A noise pulse would have to be at least 1/2
>>>>bit time wide to cause a false start trigger. At least that is how it
>>>>worked on the UARTs that I have written code for. I should never say
>>>>all because there is always the exception - I'll stick with most :-)
>>>
>>>I'm not sure about "most".
>>>
>>>--
>>>Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>>>Ukpeagvik (Barrow, Alaska) floyd@barrow.com
>>
>>
>
>--
>Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3224. FS tube tester "mighty mite VII"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 03:36:23 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <XIIsa.62462$cO3.4162088@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35727

Sencore tc162, works fine, $100, weights only 7.5lbs, e-mail for pic or
details--
73's

Those who want to be successful, will find a way,
those that don't, will find an excuse!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.474 / Virus Database: 272 - Release Date: 4/18/03

3225. Re: Serial Communications Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 07:06:37 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <878ytpddz6.fld@barrow.com>
Source record: 35728

"xyz" <w-4-i-h-k-@mindspring.com> wrote:
>You did not answer the question about a second method to test the validity
>of a start bit.

Yes I did. Early start bits are detected. Sorry if I didn't
make it clear that that was what I meant.

>Bit asynchronous (or isochronous) data streams do not necessarily consider a
>frame interval. If the condition exists wherein frame interval is to be
>considered, then you have a data stream that is not structured for the async

Asynchronous data is character framed, by definition.

We are not discussing isochronous data streams. Framing is
entirely different for an isochronous data stream, because that
is by definiton async data send over a synchronous link. (That
is an unusual topic, and anyone who wants to know what the heck
I meant by that... just ask and I'll explain it in more
detail.)

>Uncorrected bit errors can occur at anytime when forward error control is
>not used. The statement that "...two false start bits between the 1/2 bit
>test point and the 2 bit end point of the stop signal..." can just as easily
>be applied to bit one, bit two, bit three etc. as to the stop bit.

The difference (and BTW, I was wrong, it would only be 1
possible, not 2, depending on how the stop signal interval is
tested), is whether a single (uniquely defined and uncommon)
burst of noise takes out one charcter maximum, or two minimum.

>If in fact a two bit wide error occurs, then that is exactly what you
>have...a two bit error. And that happens whether you have one or two stop
>bits assigned. If test/wait/test detects a start bit, then in all
>probability you have a start bit.

With (assuming 8n2) a noise burst causing random mark/space
transitions that extend more than 1/2 bit but less than 1 bit
interval into the stop signal, it can cause an error in that
frame, garbling a single character. That of course is if the
frame interval is timed to 1/2 the stop signal width (1 whole
bit time interval).

If only 1/2 a bit time interval (1/4 of the entire stop signal)
is timed, that same noise burst will error two characters and
cause a loss of synchronization until the transmit data has a
pause long enough to allow resynchronization.

Probably the most significant part of the difference is that in
some (relatively few to be sure) instances a noise burst that
would error a single character will instead cause a loss of sync
(at machine speeds... we aren't talking about a link that has
timed data or someone pecking away at a keyboard).

>Without considering special conditions wherein a two bit time interval
>between data words is expected, a one stop bit system will talk to a two
>stop bit system without error. Maybe not so in the old days when you had
>mechanical systems that needed 'additional' time to stabilize between data
>words.

Mechanical systems didn't! On an old TTY machine, as soon as
the clutch stopped the shaft rotation, the shaft would be
immediately started by any detectable space condition. No test
for validity of start bit timing was done at all. The stop
interval wasn't timed either, and either that clutch stopped it
as it came by, or it didn't, as there was no test to see how
long the stop signal lasted any more than one to see how long
the start bit lasted.

But that didn't time between words. It timed between characters
to allow different frame lengths cause by different data rates.

The 1 1/2 bit intervals for the stop signal allowed for
different shaft speeds, and hence data rates, on the transmit
and receive machines. That was originally quit common when DC
series wound motors with a governor were used, but only a very
out of adjustment machine required extra time with a
sycnchronous AC motor.

The advantage that electronic circuits have is good enough
timing that not only can they work with only 1 stop bit, they
don't even need that much. Stop bits of 3/8 of a bit work fine
if both ends have even a fairly good clock source and only
normal amounts of jitter.

In addition, electronic circuits can test for both the start and
the stop bit being at least 1/2 the desired length (i.e., less
than 100% distortion), and lock up in mark hold looking for a
new start signal to synchronize to if it isn't found.

I thought it interesting to hear that someone had actually hard
wired a system with 2 stop bits, because frankly I don't think
I've ever heard of anyone using it for anything other than
sending to a mechancial TTY (which is why a UART that ignores
stop bit length on receive can get away with doing that, because
otherwise in this usage the tx and rx configurations would have
to be different).

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3226. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 13:24:05 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3eb27190$0$26943@echo-01.iinet.net.au>
Source record: 35729
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

As others in this thread have pointed out, you have chosen a challenging task.
I presume you are a novice and unable to access the HF bands. I have never understood this requirement - I suspect the full licensees wanted to keep HF to themselves :)
I have always found the first challenge to designing radio gear is to have good test equipment to see what is going on.
In the end I have given up designing the radios and just had fun working on the test gear :))
Ideally you will have a spectrum analyser, a decent CRO and a good sig gen - say a HP8640B. I presume you dont have these
(Many of the "experts" will though - they know it is almost impossible to do serious design work without them)
Other equipment would be a multimeter, HF receiver and homebuilt units such a s a noise bridge, return loss bridge and signal source.

I suggest
as others have pointed out - adopt a building block approach, and wherever possible get rid of variables that you can control, so that you know what the final result is.
Use good design practice with lots of bypassing, short leads and ground planes so that you know the circuit will not be unstable due to these factors
Start with a current limited, regulated power supply with voltage and current readouts
Do the easy building blocks first.
For an SSB rig I would generate the SSB at HF (say 10.7 MHz for 2M) and look at the result with an HF receiver and/or CRO (it should be possible to get hold of these cheaply)
I would consider the use of surface mount components. At VHF they are much more predictable and the techniques for SM are not too hard to master.
I would consider an FM rig rather than SSB as it is probably easier to design and there are likely to be lots more people active on FM than SSB in your local area
You might be able to get a surplus FM rig that can be modified to amateur bands if you dont want to build your own.
You can reduce the RF design by using "block" filters such as helical filters which can be got from specialist suppliers.
In the end, the hard part is knowing whether your oscillator is working when you have nothing to look at it on.
Start with a reciever - you can hear local repeaters if the LO is working.

Richard

Dwight Stewart <stewart@say.net> wrote in message
news:BAD521C0.17F9A%stewart@say.net...
>
> I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on VHF
> at the moment because of my license class, but will probably also want to
> build an HF radio sometime down the road.
>
> And, while I can actually tell the difference between a resister and a
> battery, I am clearly not an expert at electronics. So this project will
> also serve as a learning experience for me.
>
> Given the above, can you recommend a good book, again oriented towards
the
> beginner, on home brewing a VHF SSB radio?
>
> Your suggestions are truly appreciated.
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>
>
>
> ------------== Posted via Newsfeed.Com - Uncensored Usenet News
==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
=-----

3227. Amplifiers with Untuned Inputs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 14:29:17 UTC
From: ^2@vc.net
Message-ID: <^2-02050307291700001@192.168.1.200>
Source record: 35730

HF g-g amplifiers such as the Dentron MLA-2500, Heath SB-230, 374, ETO 78, and 76PA have no tuned input. This is not a problem when such a g-g amplifier is driven by a tube-output radio such as the TS-830S. The reason is that although the input Z of a cathode-driven triode fluctuates from roughly 1/3 of the average driving Z on negative peaks to a virtual open circuit on positive peaks, the Pi-network tuned circuit in a tube-output radio acts as a flywheel to smooth out the wild and crazy Z fluctuation at the cathode/s. However, with modern solid-state radios there is no tuned output, so something is needed to smooth the Z fluctuation. A possible workaround, short of adding a bank of tuned input circuits, might be to put a ultra fast recovery diode in series with the input terminating R. The diode is oriented so that the terminating R conducts only when the driving potential is positive -- which is when the tube is not conducting.. Thus, on the negative half of the driving cycle, when the tube has a low driving Z, no driving power is lost in the terminating R and the driver should see a lower SWR.
- - Unfortunately, I do not own such an amplifier to test the idea on. If anyone out there has such an amplifier and is willing to test this idea and report your findings, please inform me and I will send you a freebee 35nS, 2A, 300v switch diode.

thanks

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3228. Need Info on Yeasu FTS-12 CTCSS unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 17:50:51 UTC
From: lugehall@hotmail.com
Message-ID: <bc96ecb7.0305020950.73537fe8@posting.google.com>
Source record: 35731

I want to build a PIC based ctcss unit for use in my Yeasu handheld.
It was designed for the FTS-12 ctcss unit but those are no longer
made. At this point I am looking for any info on the FTS-12. It looks
like the micro in the radio sends the FTS-12 serial data that relates
to the tone frequency it is supposed to generate. Any idea what that
data stream looks like? TIA
JBH

3229. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-02 21:37:15 UTC
From: Sylvan Butler <Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbb5p8b.v7o.Znospam+noZs_0304@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 35732

On Thu, 1 May 2003 09:12:07 +0100, Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
wrote:
>>> >>>I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
>
>>> >>I don't know how much real estate you have - but BG Micro
>>> >>sells a 50 v 68,000uF cap - if you can go with 34,000uF,
>>> >>put 2 in series.

> I do in fact require a minimum working voltage of 75v and at least
> 60'000 uF.

So four in series + parallel. Big! :(

> I'll keep looking.

Good luck,

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

3230. Re: Toko filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 15:19:04 UTC
From: fmmck@aol.com
Message-ID: <20030503111904.25511.00000393@mb-m21.aol.com>
Source record: 35733

<< It is a can about 1/2" long by 1/4" wide and 1/2" tall with a pot core type slug at one end. There is the # CFZ-455C on the side. >>

Bob-

The part number is very similar to part numbers used by Murata on their ceramic filters. I wonder if Toko might have produced it as a second-source for an identical Murata product?

73, Fred, K4DII

3231. Re: Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 15:39:55 UTC
From: fmmck@aol.com
Message-ID: <20030503113955.25511.00000394@mb-m21.aol.com>
Source record: 35734

<< I saw a picture of a balanced ATU once that used
a balun made from RG58 turns on a former, >>

Mike-

When I read the title of your message, I jumped to the wrong conclusion. What you really are describing is an unbalanced ATU that uses a BALUN to achieve balance.

While there may be an efficiency advantage of a co-ax over a ferrite BALUN, the difference is usually not great. If I were doing it, I'd go for a good ferrite BALUN. Your project must be for QRP, where every milliwatt is important!

Have you considered an ATU that has balanced output without use of a BALUN? In years past, such tuners were available commercially. An example is the Johnson "Matchbox", which has a symetrical tuned circuit with center grounded. You may find home-brew plans for such a tuner in old handbooks from the 50s and 60s.

73, Fred, K4DII

3232. Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 15:47:52 UTC
From: 10ghz@radiate.com
Message-ID: <i5o7bv8pbegff3uukp01bqn3olt8r15rbk@4ax.com>
Source record: 35735

I'm trying to do some homebrew 10 ghz.
ARRL has two files I'd like but they say for "members only".
I'll become a member as soon as I get my license later this summer.
But I'd like the pdf file now.

1. Gunnplexers (144,130 bytes, PDF file)
2. Periscopes for Microwaves: 10 GHz without Feed-Line Loss (1,158,773 bytes, PDF file).

http://www.arrl.org/tis/info/microwave.html

If someone could grab one or both those files and send to:
kr4495@attbi.com
I'd really appreciate it! I just don't want to join till I'm sure
I get my license. It's a matter of timing.
I join them bigtime when I pass my test.

Thanks for any help.

3233. Re: Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 16:01:39 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3EB3E7E3.9020709@PAMyahoo.ca>
Source record: 35736

Be happy to do that for you.
Just confirm that you want me to..
reply to: sieb@netrover.com

10ghz@radiate.com wrote:
> I'm trying to do some homebrew 10 ghz.
> ARRL has two files I'd like but they say for "members only".
> I'll become a member as soon as I get my license later this summer.
> But I'd like the pdf file now.
>
> 1. Gunnplexers (144,130 bytes, PDF file)
> 2. Periscopes for Microwaves: 10 GHz without Feed-Line Loss (1,158,773 bytes,
> PDF file).
>
> http://www.arrl.org/tis/info/microwave.html
>
> If someone could grab one or both those files and send to:
> kr4495@attbi.com
> I'd really appreciate it! I just don't want to join till I'm sure
> I get my license. It's a matter of timing.
> I join them bigtime when I pass my test.
>
> Thanks for any help.
>

3234. YD1130 = 3-500ZG in sale nonused new NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 16:08:55 UTC
From: oh8jep <apo@kotinet.com>
Message-ID: <b90pgo$ae8$1@plaza.suomi.net>
Source record: 35737

Hello from Finland!

Just an info,I put on eBay in sale excelent new non used NOS graphite anode
triode YD1130 completely equivalent with 3-500ZG but superior in gain.
Wonderful stable tube for linear projects or for replacing
3-500ZG /3-500Z
If anyone interested it is eBay item: 3022335546

Best 73's
de Aatos OH8JEP

http://www.qsl.net/oh8jep

http://www.kotinet.com/oh8jep

3235. Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 16:10:21 UTC
From: hamish@cloud.net.au
Message-ID: <3eb3e9ed$0$15598$afc38c87@news.optusnet.com.au>
Source record: 35738

Hello,

I'm building an HF linear amp of around 300W and I'm currently considering the issue of low pass filtering. (I expect the amp itself will be based on the Motorola AN758 -- http://www.communication-concepts.com/an758.htm)

Firstly, is it correct that a push-pull amplifier will only have odd harmonics and not even? Will the intrinsic suppression of these harmonics be sufficient or will they need external filtering?

I'm trying to minimise the number of filters (and relays) needed.
If it's not necessary to filter the second harmonic, then I think I could get away with one LPF just above 10.2 MHz for 80/40/30m, and another just above 30 MHz for 20/17/15/12/10m. (I'm ignoring 160m here; that would require one more filter.)

Even if I did need to filter the second harmonic, I think I could get away with 80, 40/30, 20/17/15, and 12/10 for example.

Is this feasible, good practice etc? Critical comments welcome.
I saw some photos of homebrew solid state amplifiers on the web with 6 LPFs in the output, so perhaps there's good reason. But I'd prefer to save the money/space/effort if I can!

Finally, any suggestions on a source (online probably) for RF relays rated to 300W? High coil voltage is fine, the amp will be running from 48V.

Thanks,

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

3236. Re: Build your own MCM ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 17:16:45 UTC
From: Larry Shorthill <rfssi-shorthill@mindspring.com>
Message-ID: <b90tih$i7v$1@slb4.atl.mindspring.net>
Source record: 35739

Gary,

Hot carrier diodes work a little better than Si at HF and work a lot better at VHF. This discrete style of building mixers will give good performance comparable to commercial DBMs if you do a good job of construction. Depending on frequency ranges and signal strength core choice and size could be played with to optimize performance. Also, number of turns may show some differences in performance. Start with DeMaw's suggestions and see what you get.

I have never trusted DeMaw's designs or his documentation. His published stuff is frought with errors in the schematics. I also think he was a tinkerer and when he got something to work for him, he published it, without ever spending a lot of time seeing if it could be duplicated. He did have pretty good craftsmanship, though and his finished work always looked good. His oscillator designs are hit or miss, for example. Lots of people who have tried them say they drift all over the place.

This DBM, however, is pretty tried and true, except for the diagram error you noted. Should work FB.

73s
Larry, KC7ULI

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030501174452.19129.00000435@mb-m01.aol.com...
> Hi, has anyone built the doubly balanced mixer described in this QST
article?
> How well did it work? The article appeared in June 1987 QST p. 30, and
was
> re-printed in 1990 in "QRP Classics" p. 45.. Don't have the QST, but have
QRP
> classics.
> There is an error in Figure 2, Fig. 2(A) the schematic and Fig.2(b)
physical
> wiring do not agree. Transformer T1 is wired incorrect in the physical
drawing.
> I was going by the physical drawing when I built mine and could not get
it to
> work. I found the problem, but that was as far as I got. Before I dive
back
> in, I would like to know whether it is worth my time. (I got a little
irritated
> when I found the error).
> 73 Gary N4AST

3237. WTB: HI-POT TESTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 17:32:37 UTC
From: ham <ham@urlhits.com>
Message-ID: <3eb3fd30$0$17917$4c41069e@reader0.ash.ops.us.uu.net>
Source record: 35741

Im looking to purchace a good HI-POT tester has to go up to 15Kv dc,
homebrew ok.
Please email me offlist if you have one for sale.

Thanks

Fred

3238. Re: Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 18:21:46 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <_MTsa.3174$3f7.2494434@newssvr28.news.prodigy.com>
Source record: 35740

<10ghz@radiate.com> wrote in message
news:i5o7bv8pbegff3uukp01bqn3olt8r15rbk@4ax.com...
>
> I'm trying to do some homebrew 10 ghz.
> ARRL has two files I'd like but they say for "members only".
> I'll become a member as soon as I get my license later this summer.
> But I'd like the pdf file now.
>
> 1. Gunnplexers (144,130 bytes, PDF file)
> 2. Periscopes for Microwaves: 10 GHz without Feed-Line Loss (1,158,773
bytes,
> PDF file).
>
> http://www.arrl.org/tis/info/microwave.html
>
> If someone could grab one or both those files and send to:
> kr4495@attbi.com
> I'd really appreciate it! I just don't want to join till I'm sure
> I get my license. It's a matter of timing.
> I join them bigtime when I pass my test.
>
> Thanks for any help.
>

Actually it is very useful to belong to both your local ham radio club and
the ARRL if you have any interest in ham radio even if you don't have a
license. I've known people who were members for years but for whatever
reason did not pursue getting ham licenses.

Dee D. Flint, N8UZE

3239. Re: Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 18:47:28 UTC
From: 10ghz@radiate.com
Message-ID: <9d38bvglvi8ukosajab81jatv7gn52t3i5@4ax.com>
Source record: 35742

CQ CQ CQ

Well, we have two replies but no cigar.
Anyone else?

3240. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 19:09:10 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <qtUsa.64822$cO3.4347680@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35743
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

That spectrum analyzer is an especially handy tool. It not only allows you to see the spectral purity of your oscillators, but, when used with a noise source, it allows you to see the frequency response of filters. I have just such a noise source design posted up on my website. It is a modified version of the ARRL circuit, but with RF amplification following the noise diode, so you can have about 0dBm of RF power across the spectrum.

Pete

Richard Hosking <richardh@iinet.net.au> wrote in message news:3eb27190$0$26943@echo-01.iinet.net.au...
> As others in this thread have pointed out, you have chosen a challenging
> task.
> I presume you are a novice and unable to access the HF bands. I have never
> understood this requirement - I suspect the full licensees wanted to keep
HF
> to themselves :)
> I have always found the first challenge to designing radio gear is to have
> good test equipment to see what is going on.
> In the end I have given up designing the radios and just had fun working
on
> the test gear :))
> Ideally you will have a spectrum analyser, a decent CRO and a good sig
gen -
> say a HP8640B. I presume you dont have these
> (Many of the "experts" will though - they know it is almost impossible to
do
> serious design work without them)
> Other equipment would be a multimeter, HF receiver and homebuilt units
such
> a s a noise bridge, return loss bridge and signal source.
>
> I suggest
> as others have pointed out - adopt a building block approach, and wherever
> possible get rid of variables that you can control, so that you know what
> the final result is.
> Use good design practice with lots of bypassing, short leads and ground
> planes so that you know the circuit will not be unstable due to these
> factors
> Start with a current limited, regulated power supply with voltage and
> current readouts
> Do the easy building blocks first.
> For an SSB rig I would generate the SSB at HF (say 10.7 MHz for 2M) and
look

> at the result with an HF receiver and/or CRO (it should be possible to
get
> hold of these cheaply)
> I would consider the use of surface mount components. At VHF they are much
> more predictable and the techniques for SM are not too hard to master.
> I would consider an FM rig rather than SSB as it is probably easier to
> design and there are likely to be lots more people active on FM than SSB
in
> your local area
> You might be able to get a surplus FM rig that can be modified to amateur
> bands if you dont want to build your own.
> You can reduce the RF design by using "block" filters such as helical
> filters which can be got from specialist suppliers.
> In the end, the hard part is knowing whether your oscillator is working
when
> you have nothing to look at it on.
> Start with a reciever - you can hear local repeaters if the LO is working.
>
> Richard
>
> Dwight Stewart <stewart@say.net> wrote in message
> news:BAD521C0.17F9A%stewart@say.net...
> >
> > I'd like to build a VHF (6m or 2m) SSB radio. I'm most interested on
VHF
> > at the moment because of my license class, but will probably also want
to
> > build an HF radio sometime down the road.
> >
> > And, while I can actually tell the difference between a resister and a
> > battery, I am clearly not an expert at electronics. So this project will
> > also serve as a learning experience for me.
> >
> > Given the above, can you recommend a good book, again oriented towards
> the
> > beginner, on home brewing a VHF SSB radio?
> >
> > Your suggestions are truly appreciated.
> >
> >
> > Dwight Stewart (W5NET)
> >
> > http://www.qsl.net/w5net/
> >
> >
> >
> > ----------== Posted via Newsfeed.Com - Uncensored Usenet News
> ==----------
> > http://www.newsfeed.com The #1 Newsgroup Service in the World!
> > -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers

> =-----
>
>
>
>

3241. Re: WTB: HI-POT TESTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 19:19:21 UTC
From: ^2@vc.net
Message-ID: <^2-0305031219210001@192.168.1.200>
Source record: 35744

In article <3eb3fd30$0$17917$4c41069e@reader0.ash.ops.us.uu.net>, "ham" <ham@urlhits.com> wrote:

> Im looking to purchace a good HI-POT tester has to go up to 15Kv dc,
> homebrew ok.

** I have a 15kVac transformer for one for sale. A schematic for building one is on my Web site.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3242. Re: Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 19:31:27 UTC
From: jgboyles@aol.com
Message-ID: <20030503153127.01745.00000493@mb-m28.aol.com>
Source record: 35745

>I want to build a homebrew balanced (Dual L)
>ATU for my full wave loop antenna.
>
>Does anyone have any information on constructing
>a balun using RG58 coax ?

Mike,
A balanced antenna of the type you want to build was in Feb. 1990 QST. It used 10 meters of 50 ohm coax wound on plastic pipe 5 inches in diameter. A two liter soft drink bottle would do. The balun was used on the input side of the tuner. I think the author has a web site with the article on it, and has been spotted on this NG.
73 Gary N4AST

3243. Re: Denco coils.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 19:36:50 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <b915oh$7cj$1@titan.btinternet.com>
Source record: 35746

Max <Max_Jens@post9.tele.dk> wrote in message
news:3eb03980$0$48895$edfadb0f@dtext02.news.tele.dk...
> Hell Simon
>
> > I am trying to build an old receiver that I once had when I was very
much
> > younger, a HAC DX2 regen valve RX. I have sourced most components. Does
> > anyone know where I could obtain Denco coils (green) and a L210 triode
> valve
> > from here in the UK.
>
> The Denco coils is not made anymore, the only place I have seen them sold
> lately is on E-Bay to very high prices. Here you can find instructions on
> how
> to make your own.
>
> http://www.hanssummers.com/radio/transistor/intro.htm
>
> You might be able to get the L210 from http://www.6v6.co.uk
>
> Regards Max
>
>
Thanks for the information Max, very interesting to know about this.

Regards Simon.

3244. Re: Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 20:15:20 UTC
From: 10ghz@radiate.com
Message-ID: <9k88bvcdho2ukpjg1pfqmueha4d2ginnm8@4ax.com>
Source record: 35747

On Sat, 03 May 2003 18:47:28 GMT, 10ghz@radiate.com wrote:

>CQ CQ CQ
>
>Well, we have two replies but no cigar.
>Anyone else?

Thanks everyone for the help!
I really apreciate it!

Got em

Thanks again!

3245. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 21:36:09 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3eb43581.2827963526@news.bellatlantic.net>
Source record: 35748
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

On Thu, 1 May 2003 17:37:36 +0000 (UTC), Richard G Amirault
<amirault@shell01.TheWorld.com> wrote:

>Maybe an FM radio would be better?
>
>Richard in Boston, MA, USA
>N1JDU

An FM transmitter is much simpler as it can be crystal controlled and
same for the RX.

Building a SSB transceiver for 6 or 2m is as many said not trivial,
I've built five but then I'm also an engineer. I also have a BIG
junkbox.

MY suggestion is build a kit or two and understand them first. Then
try a simple TX maybe CW then with some of the mentioned books and
a handful of old ARRL Radio Amatuer Handbooks you may embark on
experimentation. To be successful you will need good basic test gear
and fully understand how to effectively use it. The latter is very
important as now matter how good your design you will find a miswire
or bad part will require troubleshooting. Being able to fix a radio
is an important first step if you going to experiment.

Allison
KB1GMX

3246. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 21:40:50 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3eb436fb.2828341369@news.bellatlantic.net>
Source record: 35749
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

On Sat, 03 May 2003 19:09:10 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>That spectrum analyzer is an especially handy tool. It not only allows you
>to see the spectral purity of your oscillators, but, when used with a noise
>source, it allows you to see the frequency response of filters. I have just
>such a noise source design posted up on my website. It is a modified
>version of the ARRL circuit, but with RF amplification following the noise
>diode, so you can have about 0dBm of RF power across the spectrum.

Indeed it is. Also expensive to purchase and you have to understand
it to make sanse of the results. Building one is nearly as complex as
the SSB tranceiver task.

An aside, while I've had access to one I've done a large amount of
design and construction without it. There are ways to evaluate
circuits without a spectrum analyser. A good book on exactly this is
Experimental Methods in RF Design ARRL costs 35$ but is a excellent
reference and has a lot of already published work in one place. It's
also rather light on math for the phobes.

Allison
KB1GMX

3247. Re: Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 22:42:16 UTC
From: jgboyles@aol.com
Message-ID: <20030503184216.27959.00000516@mb-m14.aol.com>
Source record: 35750

>A balanced antenna

Dang it, a balanced antenna, should read a balanced tuner. Sorry.
73 Gary N4AST

3248. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-03 23:02:55 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <zUXsa.397$5h4.52350@nnrp1.ptd.net>
Source record: 35751

<hamish@cloud.net.au> wrote in message
news:3eb3e9ed$0$15598$afc38c87@news.optusnet.com.au...
> Hello,
>
> I'm building an HF linear amp of around 300W and I'm currently considering
> the issue of low pass filtering. (I expect the amp itself will be based
> on the Motorola AN758 -- http://www.communication-concepts.com/an758.htm)
>
> Firstly, is it correct that a push-pull amplifier will only have odd
> harmonics and not even? Will the intrinsic suppression of these
> harmonics be sufficient or will they need external filtering?

Push-pull provides some, but (IMHO) not adequate harmonic
suppression.

I would use filters designed to cut off comfortably above each
desired band of operation, but capable of providing good
suppression of the 2nd harmonic in their own right ... there's
no such thing as a "too clean" signal :-) (though I recognize
the desire to keep size/cost/complexity down as well ...)

73,
Carl - wk3c

3249. Re: High Voltage Filter Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 00:51:26 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <vb8p17dpivlr91@corp.supernews.com>
Source record: 35752

Sorry about photos, please e-mail me if you are interested and I will send
you some pictures. Rob
"rob34" <rob34@infinet.com> wrote in message
news:vav5e52fbaf63@corp.supernews.com...
> I have 9 1300 ufd @ 450vdc/520 vdc surge filter capacitors for an
amplifier
> power supply along with a 225 watt 50 ohm resistor for surge and a heavy
> duty relay rated at 25 amps at 240vac with a 24vdc coil. The caps were
> pulled from working equipment some time ago and a few of the caps have
some
> slight dents in them from storage ,but they should be fine. These caps are
> 3" diameter and 4" tall. You can see a couple of pictures of them along
with
> other parts at this site: http://photos.yahoo.com/rob34115 and click on
> Robs`s photos. I will take $35 plus shipping for them. Rob WB8VWI
>
>
>
>

3250. Re: Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 03:04:48 UTC
From: ^2@vc.net
Message-ID: <^2-0305032004480001@192.168.1.200>
Source record: 35753

In article <20030503153127.01745.00000493@mb-m28.aol.com>,
jgboyles@aol.com (JGBOYLES) wrote:

> >I want to build a homebrew balanced (Dual L)
> >ATU for my full wave loop antenna.
> >
> >Does anyone have any information on constructing
> >a balun using RG58 coax ?
>
> Mike,
> A balanced antenna of the type you want to build was in Feb. 1990 QST.

** the manuscript for this article is on my Web site.

>It
> used 10 meters of 50 ohm coax wound on plastic pipe 5 inches in
diameter. A two
> liter soft drink bottle would do. The balun was used on the input side of the
> tuner. I think the author has a web site with the article on it, and has been
> spotted on this NG.
> 73 Gary N4AST

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3251. WTB:Heath IT-5283 Signal Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 03:42:07 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <j_%sa.54276$4P1.5034888@newsread2.prod.itd.earthlink.net>
Source record: 35754
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I am looking to buy a Heathkit IT-5283 Signal Tracer.Prefer one with probes
but will consider all even non working.Please state price and condition.
THANKS

3252. Re: FS tube tester "mighty mite VII"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 04:18:03 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <%v0ta.137463$ja4.6261629@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35755

SOLD>>>>>>>thanks

--

Those who want to be successful, will find a way,
those that don't, will find an excuse!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.476 / Virus Database: 273 - Release Date: 4/24/03

3253. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 08:01:21 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADA4110.19D3B%stewart@say.net>
Source record: 35756
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Roger Conroy" wrote:
>
> If you are really as raw a beginner as you claim -
> perhaps you should consider a kit?
> The good ol' guys from MFJ come to mind. No gee
> wizz performance but not a heap of junk either -
> Also very reasonably priced.

"Mark Florkowski" wrote:
>
> Try looking at the Ten-Tec line of products they
> have radios, transverters (converts 2M to 6M any
> mode). Most of what Ten-Tec sells is kits .

POSTED AGAIN BECAUSE OF SERVER PROBLEMS - SORRY IF APPEARS TWICE.

Thanks for the suggestion, both Mark and Roger. However, I've already built a few kits. And while I did learn some from those kits, it was certainly not enough to build my own VHF radio without serious guidance. There are still simply too many gaps in my knowledge about electronics. In other words, I'm still a beginner in too many areas. Because of that, the books I've seen on radio construction lose me fairly quickly. Therefore, I was hoping for a book that didn't assume so much knowledge on the part of the reader. With that, I could probably muddle my way through to a fairly basic radio.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3254. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 08:03:56 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADA41AC.19D3D%stewart@say.net>
Source record: 35757

"Avery Fineman" wrote:
>
> You need to define "radio" just a bit narrower. Receiver?
> Transmitter? Transceiver? Converter?

POSTED AGAIN BECAUSE OF SERVER PROBLEMS - SORRY IF APPEARS TWICE.

To answer your question, Avery, transceiver or receiver/transmitter pair.

> No one has to be an "expert" at electronics to do such
> homebrewing but you must differentiate between true
> design, copying some article from a magazine or book, or
> kit building. One DOES need to have certain resources
> available in the home workshop (or someplace) for any of
> the three levels: A reasonably accurate RF signal source
> for receivers covering VHF; a reasonably accurate RF
> power output measurement means for transmitters, also
> covering VHF.

Okay, perhaps I should have been more clear. Obviously, I have no desire to design a radio from scratch at this stage. I've done some kits, but was hoping to learn a little more. That leaves the book that doesn't automatically assume a certain knowledge level, yet takes one from a more "beginner" level to a better understanding of radio construction (preferably using hands on construction of a actual radio to do so).

And, yes, in spite of taking several electronics courses, there is too much I don't understand to call myself anything other than a beginner.

That book is not as easy to find as one might expect. There are books designed for beginners that take one to a certain point with no guidance on what to do next. There are more advanced books that assume a starting knowledge level far beyond where those beginner books leave off. So, I guess what I'm really hoping for is a radio book that bridges that gap.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3255. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 08:17:48 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADA44EB.19D3F%stewart@say.net>
Source record: 35758
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Richard Hosking" wrote:
>
> As others in this thread have pointed out,
> you have chosen a challenging task.

The challenge is the fun (with learning the goal).

> I have always found the first challenge to
> designing radio gear is to have good test
> equipment to see what is going on.

I'm prepared to spend a reasonable amount of money to purchase the equipment I'll need. Assuming I don't have to buy the most expensive of everything, nothing in the equipment catalogs shocked me. I also have some minor experience with various test equipment.

> I suggest as others have pointed out - adopt
> a building block approach, and wherever
> possible get rid of variables that you can
> control, so that you know what the final
> result is.

Thanks for the various suggestions. I'll keep them in mind.

> You might be able to get a surplus FM rig
> that can be modified to amateur bands if
> you dont want to build your own.

Actually, my first idea was to purchase a basic SSB kit and try building it up from there by adding capabilities. I may still do that.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3256. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 09:46:35 UTC
From: hamish@cloud.net.au
Message-ID: <3eb4e17b$0$31045$afc38c87@news.optusnet.com.au>
Source record: 35759

Carl R. Stevenson <wk3cqth@wk3c.com> wrote:
> I would use filters designed to cut off comfortably above each
> desired band of operation, but capable of providing good
> suppression of the 2nd harmonic in their own right ... there's
> no such thing as a "too clean" signal :-) (though I recognize
> the desire to keep size/cost/complexity down as well ...)

So you'd recommend one filter per band?

Thanks,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

3257. Buying antenna fedthrough insulators in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 11:09:48 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b92s9u$esbph$1@ID-150848.news.dfncis.de>
Source record: 35760
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

You must be able to buy antenna feedthrough insulators in UK, but I never seem to have an easy time finding suplliers of these kind of things these days.

Does anyone know who in UK might be able to supply antenna feedthroughs like those you see in the link. Or, does anyone have one or two to sell. Wants to be no more than about an inch or so diameter at the base. Like 10-79 or perhaps 10-76 in the link photos. They look just the job. TIA. Rich.

http://www.daburn.com/10-58.html

3258. Re: HI-POT TESTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 13:50:54 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b9369h$pr8$1@nyytiset.pp.htv.fi>
Source record: 35761

"ham" <ham@urlhits.com> schrieb im Newsbeitrag
news:3eb3fd30$0$17917$4c41069e@reader0.ash.ops.us.uu.net...
> Im looking to purchace a good HI-POT tester has to go up to 15Kv dc,
> homebrew ok.
> Please email me offlist if you have one for sale.

You could use the HV supply from a _small_ TV set, with a long string of extra resistors on the HV output so
you don't get too much output current. Just an idea... It's not a precise 15kV, but nevertheless should be
10kV .. 20kV or thereabouts.

cheers,
- jfw

3259. Re: AD9854 DDS "wobble" question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 14:50:13 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b939pgoq1@nyytiset.pp.htv.fi>
Source record: 35762

Hi all,

and thanks for the helpful comments!

"John Miles" <jmiles@pop.removethistomailme.net> schrieb im Newsbeitrag
news:sqGdna8Xz_p6Ei2jXTWcrg@giganews.com...
> "Jan Wagner" <jwagner@cc.hut.fi> wrote in message
> news:b7kbhf$7o9$1@nyytiset.pp.htv.fi...
<snip>
> > As the scope pics show, at 1.470 MHz the max phase noise (or,
> > jitter...) is about 20ns peak-to-peak. Really horrible... The
> > cheap 50MHz reference xtal oscillator which clocks the DDS is
> > rock solid compared to these 20ns of jitter.
> >
> > Shouldn't the DDS output show much less phase noise??
>
> I'd say that the artifacts you're seeing are in your DSO. The AD9854's
> spurious signals should not be visible on a time-domain instrument except
> possibly at a very few worst-case frequencies that you're not going to
> stumble upon by chance.

I'm beginning to doubt that too...

Last week (ok, haven't had much time to do ham stuff...) I hooked the DDS up attenuated to an RX in place of
the antenna signal, and at least it sounds clean. Not any birdies/spurious signals nearby in the range of DDS
LO +-100kHz. Judging from the sound and some tuning around, the DDS signal has a narrow bandwidth of "at most
10 Hz". I'll yet have to check on a spectrum analyzer for the actual figures. After I get to borrow one.

> What happens when you look at a clean LC oscillator at the same frequency?

It looks clean, without erratic shifts or wobbles or waveform dents. Actually, when the DDS output signal is
buffered (an old 2n2222 in class A,*cough* .... ;-), then it looks acceptably clean too. So it isn't a
triggering problem either.

It must be some odd problem with the digital scope and the 10x probe leads. Maybe the digital scope loading on
the output messes up the DAC in some way that I'm totally ignorant of right now.

Together with the mixer boards ham band rx sounds almost ok, so further probs are then probably caused down
the mixer side and are not DDS related. I'll try to do the spectrum analyzer and second

analog scope
measurements once I finally find the time, or then I'll just believe the DDS really _is_ clean (rx sound ok,
who wants more ;-). A big thanks to everyone for the help!!! :-)

73,
- jfw

--
****
high voltage at http://www.hut.fi/~jwagner/tesla
Jan OH2GHR

3260. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 17:44:56 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pan.2003.05.04.17.44.55.604932@oceanfree.net>
Source record: 35763

On Sat, 03 May 2003 16:10:21 +0000, hamis wrote:

Hello Hamish,

> Firstly, is it correct that a push-pull amplifier will only have odd
> harmonics and not even? Will the intrinsic suppression of these
> harmonics be sufficient or will they need external filtering?

A well balanced push-pull amplifier will give some suppression
of even harmonics. Suppression of even harmonics would probably
not be good enough to meet the strict new EI regulations
introduced by ComReg in Jan 3003.

> Even if I did need to filter the second harmonic, I think I could get
> away with 80, 40/30, 20/17/15, and 12/10 for example.

That should be ok for the best case scenario, but it is
good practice to design for the worst case. You want to
have sufficient harmonic suppression, even when the
amplifier is overdriven.

I would use at least five filters, six if you want to
include 160M.

ViPEC is a handy tool for testing your filter designs.
http://vipec.sourceforge.net Unfortunately, the
current version needs QT 2.x libs.

> Finally, any suggestions on a source (online probably) for RF relays
> rated to 300W? High coil voltage is fine, the amp will be running from
> 48V.

I usually use Iskra brand SPDT 12V relays. The relay contacts
are rated at 16A. I have used them up to 300W at HF and
130W on VHF. I have also had good results with PED brand
DPDT relays with a contact rating of 10A. You want relays
with the contacts mounted on short, wide brass strips with
plenty of physical isolation between the contacts and the
relay coil. I buy mine at the local electronics shop,
I'm sure you can find some closer to home.

73, Ed. EI9GQ Cork, Ireland.

--

Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

3261. Yet Another Panel Update

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 21:23:40 UTC
From: wb8rcr <wb8rcr_nospam@qsl.net>
Message-ID: <vbb1776qphfo86@corp.supernews.com>
Source record: 35764

A week or so ago, something really shocking was revealed to me ... there are amateurs out there, builders just like us, who build things using valves (tubes here in the colonies). Even more startling, stuff built with these strange devices tend to be large ... very large. Way too large to stuff in the suitcase for a business trip or to take camping. Nevertheless, there are actually people who do this stuff anyway!

When I wrote Panel, the idea of a panel over a foot long never occurred to me. 8 inches wide by 3 inches high is a BIG panel in my book. But these folks who build these enormous contraptions need panels too. One of them sent me a panel file that didn't work - of course not, it was bigger than the paper!

So, today I posted an update to Panel. The new version (3.2) will adjust the paper size to the panel. In the process of adding this feature, I discovered a bug in how Panel centers the panel on the page, so the new version is a little nicer that way, too.

Also, over the past couple of weeks, I've added a note to my web site to explain a little more about how these command line programs work for Windows users. (Another startling discovery I made recently is that not everyone can remember CP/M. There actually are people out there who haven't been around computers for the past 40 years.)

I've also added a man page to the Linux archive and a PDF version of the man page to the web site.

So, if you are interested in Panel for Windows command line or Linux, mosey on over to:

http://hfradio.org/wb8rcr

and click on "Panel (not QSLMaker)" to get to the Dial/Panel page. If you are a Windows user, and haven't used Panel before, please read the "Note for Windows users (PDF format 30K)".

Enjoy

didileydadidah

3262. WTB:Heath IG-5280 RF Oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 21:32:43 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <%Ffta.55577$4P1.5140218@newsread2.prod.itd.earthlink.net>
Source record: 35765
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Wanted to buy Heathkit IG-5280 RF oscillator.Not working ok.Please state
price and condition.
THANKS

3263. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 21:50:33 UTC
From: averyfineman@aol.com
Message-ID: <20030504175033.18771.00000346@mb-m18.aol.com>
Source record: 35766

In article <BADA41AC.19D3D%stewart@say.net>, Dwight Stewart <stewart@say.net>
writes:

>"Avery Fineman" wrote:
>>
>> You need to define "radio" just a bit narrower. Receiver?
>> Transmitter? Transceiver? Converter?

> To answer your question, Avery, transceiver or receiver/transmitter pair.
>
>> No one has to be an "expert" at electronics to do such
>> homebrewing but you must differentiate between true
>> design, copying some article from a magazine or book, or
>> kit building. One DOES need to have certain resources
>> available in the home workshop (or someplace) for any of
>> the three levels: A reasonably accurate RF signal source
>> for receivers covering VHF; a reasonably accurate RF
>> power output measurement means for transmitters, also
>> covering VHF.
>
> Okay, perhaps I should have been more clear. Obviously, I have no desire
>to design a radio from scratch at this stage. I've done some kits, but was
>hoping to learn a little more. That leaves the book that doesn't
>automatically assume a certain knowledge level, yet takes one from a more
>"beginner" level to a better understanding of radio construction (preferably
>using hands on construction of a actual radio to do so).
>
> And, yes, in spite of taking several electronics courses, there is too
>much I don't understand to call myself anything other than a beginner.
>
> That book is not as easy to find as one might expect. There are books
>designed for beginners that take one to a certain point with no guidance on
>what to do next. There are more advanced books that assume a starting
>knowledge level far beyond where those beginner books leave off. So, I guess
>what I'm really hoping for is a radio book that bridges that gap.

Several others have suggested very good books, notably
those published by ARRL.

A couple other sources are the publications of the RSGB (in
English English...:-) www.rsgb.org and the Ham Radio
Bookstore listings at CQ Communications Inc.
http://ssl.sunserver.com/cq/index.ihtml

An "inbetweener" source is Harry's Homebrew Homepage at
http://w1.859.telia.com/~U85920178/

Harry Lythall (SM0VPO) is an electronics technology instructor in Sweden and writes very well. He does a lot of simpler project construction with everything well illustrated in clear European-style schematics and good photos (of most projects).

There are several other websites with such information and good explanations. As a personal preference, I rate the RSGB's publications as offering more detail, especially mechanical items, than the average ARRL described project...a decade or two ago when both publishers weren't skimping on pages printed. :-)

The only one who can divine what you want or need is you, Dwight. If you find a good technical library or large bookstore that sells radio related books, go there and browse, do some skimming through contents, illustrations, see what is familiar and not familiar to you. An ARRL floor rack at an HRO store is okay but there is a lot more available for learning about radio, amateur or otherwise.

Knowledge builds upon itself in any technology, but you MUST be familiar enough with the basics to go through all succeeding levels. You can "start in the middle" and go both ways but that takes much, much longer than a linear learning process...even longer without guidance from an instructor. If you encounter an area in radio technology that is unfamiliar to you or you don't understand it, break off temporarily and concentrate learning on that area...then continue with the main subject of your learning.

Everything in a "radio" is interrelated. A "radio" is a system and the system is made up a group of interconnected circuit blocks. Those blocks may have smaller blocks within them, each one having a specific purpose. The smallest blocks are the circuits themselves. You must recognize that blocks aren't separate entities standing alone; bigger blocks have basic relationships within the "radio" in order to work together (image response in a superheterodyne is one such and the amount of image rejection will dictate how and why certain smaller blocks are configured as well as their component values).

A "radio" isn't a multi-dimensional crossword-like puzzle that it may seem. Once you understand the system-block-miniblock-circuit structure and the necessity for certain block-to-block operation specifications, all the different dependencies will align themselves in your mind and you can concentrate detailed thinking anywhere you want.

There is NO "best" way to design-build-whatever any "radio." There are many different ways to do that. For hobby purposes the "best" choice is dictated by intended use, cost of parts, ability to construct, test equipment available, skill level of the builder or student. Anyone can be misled into what consitutes the "best" way to do something, especially when advertisements

for radios abound. Each advertiser is striving mightily to separate money from your wallet in exchange for their product. The latest and greatest advertised whiz-bang technofeature may be too much whistling and bell-ringing than you really need...and also may be just so much phlogiston specification-wise (like the gold-plated music system speaker wires for "maximum sound quality"...as if all can hear a thousandth of a db difference).

All the book publishers are into advertising their products, too. [they are pretty good wordsmiths] The difference between books and electronic equipment is that books can be readily opened and examined in detail...not possible with most electronic stuff. For that reason I recommend BROWSING what is available to see what you need. You are your best judgement source on what you know or don't know.

Len Anderson
retired (from regular hours) electronic engineer person

3264. Re: Yahoo Group for Radio Shack DX-394 Users

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 23:00:46 UTC
From: Tom Holden <holden_family@sympatico.ca>
Message-ID: <7Vgta.309$J%5.64231@news20.bellglobal.com>
Source record: 35767
Cross-posted to:
rec.radio.shortwave,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

As of May 4, 2003, this group has more than 394 members with 957 archived messages, dozens of files, photos and links for mods, tips and docs. If you have a DX-394 or are interested in finding out more before getting one (there's almost always a few for sale or auction on eBay), join us. Our group has the most comprehensive set of mods, tips and docs among all the SW radio groups - reflecting the opinion of one reviewer who called the DX-394 a "hacker's delight" and the need for improvement that has caused many to trash the radio - both literally and figuratively.

A sub-group with 57 members was formed on Jan 29 to focus on modifying the DX394 for computer control. This group is at http://groups.yahoo.com/group/DX-394C/ .

73, Tom VE3MEO

> http://groups.yahoo.com/group/RADIOSHACKDX394/ has grown to 278 members as
> of Jan 17/2003 with 659 messages archived. An important addition to the
> website Files and Links since the last posting is:
>
> - Organised compilation of summaries of all known mods with links to
> sources.
>
> This index and synopsis of the mods will help you navigate through the
maze
> of files to find the ones of greatest interest to you. You'll need to join
> Yahoo as well as subscribe to the group to see this file and many of the
> mods it describes. Just click on the link at the top or bottom of this
> message to apply for membership.
>
> 73, Tom VE3MEO
>
> ----------POSTED 28NOV2002----------
> "Tom Holden" <holden_family@cbc.ca> wrote in message news:...
> http://groups.yahoo.com/group/RADIOSHACKDX394/ has grown to 225 members.
It
> has the most complete collection of modifications, usage tips, links to
> related websites, documentation, and photos along with a user survey and a
> message forum (585 messages archived) to help you get the most pleasure
and
> DX out of your Realistic / Radio Shack DX-394, DX394, DX 394.
>
> Additions to Files and Links since the last posting include:
>

> - Options for the DX-394 Telescoping Whip Antenna - techniques for better
> SNR
> - DX-394 AGC Circuit, A-Model Factory Kluge, and Custom Modifications for
> Fast Attack, 3-Speed Release and Defeat
> - Understanding the Principles of DX-394 Frequency Tuning
> - Component Data Sheets
> - Exploded assembly diagram, printed circuit board layout and schematic
with
> markups for mods, etc.
> - Switchable IF Bandwidth for the DX-394 - mod to make IF filters
selectable
> from front panel
> - Don Tomkinson's mod to enhance bass output to speaker and headphones.
> - Compilation of Frank Cathell's popular mods for the DX-394 with
correction
> for the Noise Blanker mod. Includes: AGC MOD, CROSSTALK MODS, NOISE
BLANKER,
> RF GAIN MOD, AUDIO 'HISS' MOD, CERAMIC FILTER MOD FOR AM (Poor Man's
Kiwa).
> - RS232 Serial Control Mod by Laurent Beaulieu
> - Links to s/w & h/w for add-on IF filters, demodulators, noise blankers,
> audio filters, etc.
> - Links to software and IF converters for possible adaptation of DX-394 as
> front end for software receiver of DRM digital audio transmissions from
> international broadcasters.
> - Links to downloadable User Manual and to vendors of Service Manual
>
> All those with an interest in this popular radio are welcome to join. Use
> the link at the top or bottom of this message.
>
> 73, Tom VE3MEO
>
> ----------POSTED 13AUG2002 ----------
> "Tom Holden" <holden_family@cbc.ca> wrote in message news:...
> > For those into modifying their DX-394, here are two good collections of
> > files: www.mods.dk and
> http://groups.yahoo.com/group/RADIOSHACKDX394/files/
> >
> > Index of www.mods.dk:
> > - Ceramic filter mod for AM
> > - AGC mod
> > - Crosstalk mods
> > - Noise blanker mod
> > - Audio HISS mod
> > - Keyboard beep delete
> > - Audio enhancement
> > - Radio Shack DX-394 Standby Mod
> > - Adding Front Panel Switches to the Radio Shack DX-394 General
> > Coverage Receiver

> > - Soup up the DX-394 Knob Pointers
> > - VHF Image Filter for the DX-394 Whip Antenna
> > - Shielding the DX-394 with Aluminum Foil
> > - RS-232 Serial Control of DX-394 English language (214 Kbytes)
> > - Superior Shielding of the DX-394 with Steel Lids
> > - Ultimate Shielding of the DX-394
> >
> > I think Frank Cathell authored all of the ones dated 23-07-2000 and I'm
> > guilty of authoring or editing the rest. The following list from the
Yahoo
> > SIG duplicates much of the above as I have posted my stuff there, also.
> With
> > a membership of over 140, it's the largest known group of users of this
> > receiver although it's possible there may be more viewers of Usenet
> > newsgroups with DX-394's.
> >
> > Index of http://groups.yahoo.com/group/RADIOSHACKDX394/files/
> > DX-394_KnobPointers.htm Description of mod for white knob pointers with
> > photo.
> > DX-394_foil.htm Instructions for improving the shielding of the DX-394
by
> > lining the lids with aluminum foil.
> > DX-394_serial.htm Updated description and images of Russ Hellar's mods
> for
> > serial control of the DX-394 by a computer.
> > DX-394_shields.htm Ultimate Shielding of the DX-394 or "The Shields
that
> > should have been"
> > DX-394_standby_mod.htm Mod to add dedicated front panel switch and/or
> > external interface for control of STAND BY mode for ham use.
> > DX-394_steel_lid.htm Superior Shielding of the DX-394 with Steel Lids.
> Main
> > page.
> > DX-394_switches.htm Description and photo of switches and LED added to
> Tom
> > Holden's DX-394A at VE3MEO
> > MainsFilterChoke.htm Add a Mains Filter Choke to your DX-394 to Reduce
> > Ingress of Interference from the AC Power System
> > VHFimagefilter-whip.htm VHF image filter for DX-394 whip antenna -
> > description.
> > dx-394-Schematicsb.JPG DX-394 Mechanical assembly drawing
> >
> > The Yahoo site also has a discussion forum and relevant links to other
> > sites. You have to join Yahoo and register in the group to be able to
use
> > features other than the e-mail reflector.
> >
> > 73, Tom VE3MEO
> >

> ---------- POSTED 25JULY2002 ----------
> > "Tom Holden" <holden_family@cbc.ca> wrote in message
> > news:2b309.9274$DN4.1739782@news20.bellglobal.com...
> > > Hi all you Radio Shack DX-394 users. I came across a SIG for this
> > > much-loved, -modified and -maligned receiver that you may find of
> interest.
> > > It's been up since Jan 2001, has 109 members, 171 postings and has all
> those
> > > wonderful YahooGroups features ready to be exploited: Chat, Files,
> Photos,
> > > Bookmarks, Database, Polls, Calendar. And ads - the price of
"free"-dom.
> > > Hope to see you there.
> > >
> > > Regards,
> > >
> > > Tom
> > >
> > > http://groups.yahoo.com/group/RADIOSHACKDX394/
> > >
> > > RADIOSHACKDX394 • A Club for those who use and love the DX-394
> > >
> > > A Fan Club for the Radio Shack DX-394 Shortwave Reciever. Please post
> your
> > > thoughts and ideas of the DX-394. Your favorite Links to other Great
> DX-394
> > > sites. Also helpful Hints and Tips.
> > >
> > > Subscribe: RADIOSHACKDX394-subscribe@yahoogroups.com
>
>

3265. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 23:15:29 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1052090129.738281@auth2.dns.griffin.net.uk>
Source record: 35768

see how yeasu kenwood etc do theirs on the various hf rigs..they use push
pull amps (100w only) and copy it...
simon g0zen
"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
news:pan.2003.05.04.17.44.55.604932@oceanfree.net...
> On Sat, 03 May 2003 16:10:21 +0000, hamis wrote:
>
>
> Hello Hamish,
>
> > Firstly, is it correct that a push-pull amplifier will only have odd
> > harmonics and not even? Will the intrinsic suppression of these
> > harmonics be sufficient or will they need external filtering?
>
> A well balanced push-pull amplifier will give some suppression
> of even harmonics. Suppression of even harmonics would probably
> not be good enough to meet the strict new EI regulations
> introduced by ComReg in Jan 3003.
>
>
> > Even if I did need to filter the second harmonic, I think I could get
> > away with 80, 40/30, 20/17/15, and 12/10 for example.
>
> That should be ok for the best case scenario, but it is
> good practice to design for the worst case. You want to
> have sufficient harmonic suppression, even when the
> amplifier is overdriven.
>
> I would use at least five filters, six if you want to
> include 160M.
>
> ViPEC is a handy tool for testing your filter designs.
> http://vipec.sourceforge.net Unfortunately, the
> current version needs QT 2.x libs.
>
> > Finally, any suggestions on a source (online probably) for RF relays
> > rated to 300W? High coil voltage is fine, the amp will be running from
> > 48V.
>
> I usually use Iskra brand SPDT 12V relays. The relay contacts
> are rated at 16A. I have used them up to 300W at HF and
> 130W on VHF. I have also had good results with PED brand
> DPDT relays with a contact rating of 10A. You want relays
> with the contacts mounted on short, wide brass strips with

> plenty of physical isolation between the contacts and the
> relay coil. I buy mine at the local electronics shop,
> I'm sure you can find some closer to home.
>
> 73, Ed. EI9GQ Cork, Ireland.
>
>
> --
>
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.20
>

3266. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-04 23:36:52 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <ouhta.457$5h4.70430@nnrp1.ptd.net>
Source record: 35769

<hamish@cloud.net.au> wrote in message
news:3eb4e17b$0$31045$afc38c87@news.optusnet.com.au...
> Carl R. Stevenson <wk3cqth@wk3c.com> wrote:
> > I would use filters designed to cut off comfortably above each
> > desired band of operation, but capable of providing good
> > suppression of the 2nd harmonic in their own right ... there's
> > no such thing as a "too clean" signal :-) (though I recognize
> > the desire to keep size/cost/complexity down as well ...)
>
> So you'd recommend one filter per band?

That's how I'd do it.

73,
Carl - wk3c

>
>
> Thanks,
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

3267. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 03:53:08 UTC
From: Rick Karlquist N6RK <richard@karlquist.removethis.com>
Message-ID: <Eelta.736366$L1.209792@sccrnsc02>
Source record: 35770

Be sure that whatever filters you use provide a high input
impedance at harmonics. This can be assured by using
a coil input filter and locating it close to the output
transistors. Avoid long runs of coax between the
amplifier and filter. Doing this will get you up to 50%
more output power. The explanation for this is complicated, and involves
doing a Fourier series
analysis. It turns out that the open circuited harmonic
impedance allows the voltage waveform to clip, which
increases power at the fundamental. This is probably
NOT obvious. Maybe Helge explained it somewhere
in his voluminous writings, but you may not have seen it.
Another non-obvious thing is that most 12V designs
depend on collector trace inductance for their operation,
so if you "improve" the board layout, they won't work.
I don't believe Helge ever documented this, if he even
knew it himself.

Rick N6RK
<hamish@cloud.net.au> wrote in message
news:3eb3e9ed$0$15598$afc38c87@news.optusnet.com.au...
> Hello,
>
> I'm building an HF linear amp of around 300W and I'm currently considering
> the issue of low pass filtering. (I expect the amp itself will be based

3268. MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 05:18:15 UTC
From: willfull_buck@yahoo.com
Message-ID: <7722f36c.0305042118.4177a2@posting.google.com>
Source record: 35771

About two weeks ago, a co-worker brought a frequency counter to my office. Just for fun I turned it on and 155.700mhz displayed. Next day we tuned a scanner to that frequency...Feedback City. Five other offices have the same situation on slightly different frequencies.

We let the boss know, but he thinks we are watching too much X-files. The company I work for handles a lot of personal info. Peoples SS#, date of birth, ect.

I could call the police, but that might get me fired. I just thought if we could block the transmitters that might make it safer.

Could someone please give me a circuit that would jam these transmitters?

3269. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 05:26:08 UTC
From: whagen6@cs.com
Message-ID: <20030505012608.04977.00000543@mb-m05.news.cs.com>
Source record: 35772

probably your computers.

3270. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 05:48:44 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <5D75DF39AF21E6A6.D3BA697EC812E201.F60DCAE2A45C1123@lp.airnews.net>
Source record: 35773

"john s" <willfull_buck@yahoo.com> wrote in message
news:7722f36c.0305042118.4177a2@posting.google.com...
> About two weeks ago, a co-worker brought a frequency counter to my
> office. Just for fun I turned it on and 155.700mhz displayed. Next day
> we tuned a scanner to that frequency...Feedback City. Five other
> offices have the same situation on slightly different frequencies.

A couple of suggestions:

1. Get a set of closed-ear headphones for the scanner, or cheap earplug phones inside of 30 dB hearing protectors. Give another listen, and see if you are actually hearing speech or just tones.

2. Talk with the local ham radio club and see if they know any hams at the local TV station. See if you can borrow an engineer and a portable spectrum analyzer that will cover the frequencies in question. Bring the engineer and the analyzer in, and let him look at the signals. He will be able to tell you in a few seconds whether you have an audio bug, an audio/video bug, or just a noisy computer or LAN.

> We let the boss know, but he thinks we are watching too much X-files.
> The company I work for handles a lot of personal info. Peoples SS#,
> date of birth, ect.
>
> I could call the police, but that might get me fired. I just thought
> if we could block the transmitters that might make it safer.
>
> Could someone please give me a circuit that would jam these
> transmitters?

You don't want to try that. You will get the FCC very unhappy with you.

3271. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 05:58:33 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <rqrbbvs74gcs6sn9fn16754vtiga61g8d4@4ax.com>
Source record: 35774

On Sun, 04 May 2003 17:44:56 +0000, "Eamon Skelton"
<Xnospam@oceanfree.net> wrote:

>On Sat, 03 May 2003 16:10:21 +0000, hamis wrote:
>
>
>Hello Hamish,
>
>> Firstly, is it correct that a push-pull amplifier will only have odd
>> harmonics and not even? Will the intrinsic suppression of these
>> harmonics be sufficient or will they need external filtering?
>
>A well balanced push-pull amplifier will give some suppression
>of even harmonics. Suppression of even harmonics would probably
>not be good enough to meet the strict new EI regulations
>introduced by ComReg in Jan 3003.

Would it be practical to design a broadband (say 1-30 MHz) amplifier
with negative feedback ? This would reduce the distortion when the
amplifier is _not_overdriven_. Since the gain would be set by passive
components, the maximum input signal could be well defined and limited
by a low level limiter and filter prior to the amplifier.

Getting adequate phase margins would be a challenge and may require
using UHF power transistors for adequate fT, which would make the
design quite costly. Is there other ways to get adequate phase margins
when the output transistor fT is only slightly above the required
frequency range ?

After all negative feedback is used in some receiver front end designs
to get a high IP3 value with a reasonable power consumption. Modified
audio amplifiers with a feedback loop are also used on the 135 kHz
band.

Paul OH3LWR

3272. List of Tube FS at Dayton HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 10:37:50 UTC
From: Dave Woolf <dwoolf@worldnet.att.net>
Message-ID: <3EB63F0D.5080701@worldnet.att.net>
Source record: 35775
Cross-posted to:
rec.radio.swap,rec.radio.amateur.homebrew,rec.antiques.radio+phono,alt.ham-radio.marketplace,rec.radio.amateur.boatanchors

Our Radio Club is attempting to clear out an inventory of NOS tubes.
These will be available at Dayton Hamvention. We will be in the
Flea Market spaces 734 and 735. We intend to be there all day Fri.
and Sat. The list of our inventory is attached.

Dave Woolf - K8RSP
for:
CRES ARC - W8ZPF
(146.67/07 Repeater Columbus, OH)

TUBE Quantity

2022 1
2050A 2
5642 4
5651A 4
5840 2
5841 1
5879 1
5963 1
6072 2
6211 5
6211A 9
6080 3
7233 1
7534/E130L 2
7586 10
7591A 1
7788 2
8393 4
8416 2
8608 4

0A3 2
0G3 3
1L4 2
1AY2 1
1G3GT/1B3GT 1
1K3/1J3 1
1N5GT 1
2D21W 3
3DB3/3CY3 2
5U4GB 8
5V4GA 6

5Y3GT 2

6AG7 5
6AH6 3
6AK5 9
6AM6 6
6AM8A 2
6AN4 1
6AN8A 5
6AQ5A 1
6AS5 4
6AS6 13
6AS7G 2
6AU4GTA 1
6AU5GT 5
6AU6A 9
6136/6AU6WA 7
6AV5GA 2
6AX5GT 3
6BA8A 5
6BF11 1
6BH6 4
6BH8 4
6BJ7 4
6BL7GTA 3
6BM8 2
6BN6 2
6BQ7A 2
6BS8 1
6BW4 4
6BY6 3
6BY8 7
6C5 2
6CB6A/6CF6 11
6CM4 2
6CM5/EL86 2
6CW4 3
7895/6CW4 1
6CW5 26
6CX8 10
6CZ5 3
6DJ8 6
6DK6 5
6DQ5 1
6DQ6B/6GW6 2
6DW4B 1
6EV5 1
6EW6 2
6GE8/7734 25
6GF5 7

6GF7A 1
6GJ7 1
6GM8 5
6GT5A 2
6GV8 3
6H6 3
6J5 1
6J7 4
6JZ8 1
6K6GT 10
6MD8 1
6N7 6
6S4A 5
6SF5 1
6SH7 3
6SL7GT 6
6SN7GTB 3
6SU7GTY 2
6T8A 24
6W4GT 1
6W6GT 2
6202/6X4WA 10
6X5GT 2
6X8A 1

12AL5 5
12AQ5 24
12AU7A 13
12AT6 1
12AV7 1
12B4A 2
12BH7A 6
12BL6 1
12H6 5
12SL7GT 3
12SN7GTA 7
25L6GT 4
38HK7 1
50B5 2

3273. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 11:07:26 UTC
From: fmmck@aol.com
Message-ID: <20030505070726.24076.00000682@mb-m27.aol.com>
Source record: 35776

<< Feedback City. Five other
offices have the same situation on slightly different frequencies. >>

John-

You need to find the bug if there really is one. Perhaps the counter or the scanner has a signal-strength indicator to help you locate it.

The Boss can't argue with the evidence. But beware, you could still lose your job. What if your Boss is the one listening-in on his employees? Bearing that in mind, don't be surprised if the signals have disappeared since alerting your boss!

Fred

3274. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 11:58:23 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <42icbv895gmcj2nh5nngq9t3shbculqmba@4ax.com>
Source record: 35777

In <7722f36c.0305042118.4177a2@posting.google.com>, willfull_buck@yahoo.com (john s) wrote:

>About two weeks ago, a co-worker brought a frequency counter to my
>office. Just for fun I turned it on and 155.700mhz displayed. Next day
>we tuned a scanner to that frequency...Feedback City. Five other
>offices have the same situation on slightly different frequencies.
>
>We let the boss know, but he thinks we are watching too much X-files.
>The company I work for handles a lot of personal info. Peoples SS#,
>date of birth, ect.
>
>I could call the police, but that might get me fired. I just thought
>if we could block the transmitters that might make it safer.
>
>Could someone please give me a circuit that would jam these
>transmitters?

The first step is not to jump to conclusions.

The second step is to use headphones with your scanner to prevent feedback. If you still get what sounds like feedback, it's probably not a bug at all, but likely just some computer noise. OTOH, if you hear office noises from the scanner then your best course of action is to contact the FCC immediately.

However, if you want to pinpoint the source yourself, you can use the squelch knob on your scanner to locate the source of these signals. Turn up the squelch until the signal just cuts out, then walk around the office until it kicks in again. Repeat this several times and eventually you will be able to narrow down a small area. Then remove the antenna and you should be able to pinpoint the source. It will probably be leakage from a cheap computer case.

But assuming your scanner indicates that you have a bug: As someone else stated, they may have been put there by the boss. They may also have been put there by a business competitor. What I find strange is the frequency -- commercially available bugs don't usually use VHF Public Safety Pool freqs, they are almost always in the FM broadcast band or high in the UHF spectrum, and the Feds use stuff in the tens of Gigahertz. So there is a possibility that the bugs (if they exist) were planted by local law enforcement. Another possibility is that they are the tools of a techno-stalker. So before you embark on a bug-hunt, first consider all the possibilities and their consequences.

BTW, jamming is not an option because of the possibility that the bugs are legal, in which case you could get popped by the FCC for causing harmful interference, and maybe even for obstruction of justice. Not only that, but you will be building a jammer that screws with Safety Pool freqs (Fire, Police,

Ambulance, etc), which could endanger lives. Let the FCC handle it.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3275. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 13:41:05 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87fzntzf2m.fld@barrow.com>
Source record: 35778

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>willfull_buck@yahoo.com (john s) wrote:
>
>>About two weeks ago, a co-worker brought a frequency counter to my
...
>>Could someone please give me a circuit that would jam these
>>transmitters?
>
>The first step is not to jump to conclusions.
>
>The second step is to use headphones with your scanner to prevent feedback. If
>you still get what sounds like feedback, it's probably not a bug at all, but
>likely just some computer noise. OTOH, if you hear office noises from the
>scanner then your best course of action is to contact the FCC immediately.

The FCC has no jurisdiction unless the transmitters are illegal
due to license requirements. That is very unlikely.

The FBI and the local police who enforce State laws have
jurisdiction, but one needs to be *very* sure of what is going
on first. Second, you need to realize that while a monitoring
device may be illegal, it is also true that the police agencies
have murders to investigate too. Your place on their priority
list might be a bit lower than ensuring the men's washroom is
properly cleaned by the janitorial crew.

>However, if you want to pinpoint the source yourself, you can use the squelch
>knob on your scanner to locate the source of these signals. Turn up the squelch
>until the signal just cuts out, then walk around the office until it kicks in
>again. Repeat this several times and eventually you will be able to narrow down
>a small area. Then remove the antenna and you should be able to pinpoint the
>source. It will probably be leakage from a cheap computer case.

Stop and think about how to locate the device first. If it is
in fact a monitor, you do *NOT* want to give away the fact that
it has been located. That is true even if you have already
spilled the beans loudly that you know it exists.

Find it. Then *watch* it. If somebody tries to remove it,
bingo, you then know who put it there.

>But assuming your scanner indicates that you have a bug: As someone else stated,
>they may have been put there by the boss. They may also have been put there by a
>business competitor. What I find strange is the frequency -- commercially
>available bugs don't usually use VHF Public Safety Pool freqs, they are almost
>always in the FM broadcast band or high in the UHF spectrum, and the Feds use

>stuff in the tens of Gigahertz. So there is a possibility that the bugs (if they
>exist) were planted by local law enforcement. Another possibility is that they
>are the tools of a techno-stalker. So before you embark on a bug-hunt, first
>consider all the possibilities and their consequences.

And consider whose feet you are stomping on by going public with
it. Almost regardless of who put it there, finding it is going to
raise some kind of a stink. You want to be well prepared legally,
and politically, before the shit hits the fan.

The most important advice is SHUT UP. Stop talking loudly and stop
posting to Usenet!

If going to the boss didn't get even a raised eyebrow for a
response, he is almost certainly either too dumb to talk, or was
well aware that it existed and knows who put it there and why.
In other words, the OP is already probably in hot water.

>BTW, jamming is not an option because of the possibility that the bugs are
>legal, in which case you could get popped by the FCC for causing harmful
>interference, and maybe even for obstruction of justice. Not only that, but you

That is off the scale of concerns. Jamming can be done very
legally. For example, playing a loud radio in the room with it
sitting right next to the bug is "jamming", and legal. As far
as RF, you'd need to know where the _receiving_ end is, so trying
to use RF jamming isn't likely to effective.

>will be building a jammer that screws with Safety Pool freqs (Fire, Police,
>Ambulance, etc), which could endanger lives. Let the FCC handle it.

There are effective ways to handle it, and the FCC isn't likely
to be any part of it (unless it is in an FCC office!).

But just what the effective ways are depends totally on just where
this bug is, who put it there, and who is being monitored... none
of which have been disclose and none of which the OP should be even
whispering about in any place like Usenet.

(I've had the most unusual experience of actually finding a
wiretap in the work place, calling the FBI, talking to lawyers
about it, and surviving the politics that resulted. The result
was one technician immediately transfered to an engineering slot
to protect him from union backlash, one supervisor fired seven
months later, one manager fired one year later, and one VP let
loose two years later.)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3276. Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 15:37:49 UTC
From: John Mortlock <heads@global.freeserve.co.uk>
Message-ID: <b962tn$5d6$1@news8.svr.pol.co.uk>
Source record: 35779

While visiting Dayton are there any Ham shops or Surplus electronics outlets nearby ?

Thanks,
John G3UGY

3277. Re: Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 17:21:13 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <d4xta.50181$3h5.1412282@news2.east.cox.net>
Source record: 35780

Well, Most of the ham-type shops will be at the hamvention.

Surplus Electronics:

My favorite is Midwest Surplus Electronics on Main St in Fairborn, OH --
just outside Wright Patterson AFB.

Also, Mendelsohn is downtown on 2nd St (?).

And, you will be just down the road (approx 70 miles) from Fair Radio in
Lima, OH..

What did I miss?

Larry Keith
KQ4BY

"John Mortlock" <heads@global.freeserve.co.uk> wrote in message
news:b962tn$5d6$1@news8.svr.pol.co.uk...
> While visiting Dayton are there any Ham shops or Surplus electronics
outlets
> nearby ?
>
> Thanks,
> John G3UGY
>
>

3278. WTD: ½" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 18:00:52 UTC
From: Michael Slattery <delete@source.com>
Message-ID: <tl9dbv8q67l7opi4cn1p4udn6nn900i4uk@4ax.com>
Source record: 35781
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Wanted:
Half inch diameter ferrite rods. Must be at least six inches long.
Willing to pay good money. I'm in Sheffield, UK. Please telephone
Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.

via
--
wildbear@bigfoot.com

3279. Re: Can any ARRL members help me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 18:07:54 UTC
From: Jim Hudson <jlhudson@ev1.net>
Message-ID: <3EB6A87A.EE6EC2AF@ev1.net>
Source record: 35782

You should also spend some time at Paul Wade's site:

http://www.w1ghz.org/10g/10g_home.htm

10ghz@radiate.com wrote:

> I'm trying to do some homebrew 10 ghz.
> ARRL has two files I'd like but they say for "members only".
> I'll become a member as soon as I get my license later this summer.
> But I'd like the pdf file now.
>
> 1. Gunnplexers (144,130 bytes, PDF file)
> 2. Periscopes for Microwaves: 10 GHz without Feed-Line Loss (1,158,773 bytes,
> PDF file).
>
> http://www.arrl.org/tis/info/microwave.html
>
> If someone could grab one or both those files and send to:
> kr4495@attbi.com
> I'd really appreciate it! I just don't want to join till I'm sure
> I get my license. It's a matter of timing.
> I join them bigtime when I pass my test.
>
> Thanks for any help.

3280. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 21:03:56 UTC
From: averyfineman@aol.com
Message-ID: <20030505170356.18755.00000528@mb-m06.aol.com>
Source record: 35783

In article <rqrbbvs74gcs6sn9fn16754vtiga61g8d4@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On Sun, 04 May 2003 17:44:56 +0000, "Eamon Skelton"
><Xnospam@oceanfree.net> wrote:
>
>>On Sat, 03 May 2003 16:10:21 +0000, hamis wrote:
>>
>>Hello Hamish,
>>
>>> Firstly, is it correct that a push-pull amplifier will only have odd
>>> harmonics and not even? Will the intrinsic suppression of these
>>> harmonics be sufficient or will they need external filtering?
>>
>>A well balanced push-pull amplifier will give some suppression
>>of even harmonics. Suppression of even harmonics would probably
>>not be good enough to meet the strict new EI regulations
>>introduced by ComReg in Jan 3003.
>
>Would it be practical to design a broadband (say 1-30 MHz) amplifier
>with negative feedback ? This would reduce the distortion when the
>amplifier is _not_overdriven_. Since the gain would be set by passive
>components, the maximum input signal could be well defined and limited
>by a low level limiter and filter prior to the amplifier.

Theoretically it is possible. Practicality is another matter.

Negative feedback requires the fed back phase to be within
something like within 160 to 200 degrees, depending on the
feedback network loss and amplifier gain magnitude...AND
the open-loop amplifier phase shift between feedback network
input and the point of feeding back the RF in the amplifier.

A full decade bandwidth amplifier (more likely 2 to 30 MHz
rather than 1 to 30 MHz) usually experiences more phase
shift over that bandwidth than can be realized by just looking
at it and/or its schematic. You MUST measure it fairly
accurately to understand it...an area where the (unfortunately)
very expensive Vector Voltmeters can excell.

The "passive" feedback network will also have a phase shift
variation across that decade bandwidth that may be beyond
the allowable phase margin. It MUST be tailored in phase as
well as magnitude to fit with the measured magnitude-phase
characteristics of the amplifier.

Operational amplifiers are deliberately designed and built to exhibit a limited amount of phase shift that is fairly well about 90 degrees close to their open-loop unity-(magnitude)-gain frequency. That's done even when they use high-f-sub-t transistor junctions and have open-loop gain magnitudes reaching all the way to 500 MHz. Op-amps are very broad-band, all their internal reactances are tightly controlled and reproducible. That allows all op-amp users to tailor closed-loop frequency responses by their external feedback networks.

Even with "broadband" design using solid-state devices, the actual open-loop phase shift characteristics in the linear operating region can exhibit a fairly wide phase shift input to output. Those "broadband" transformers are good for level magnitude response but phase shift can vary. Often there are simple input-output passive networks to match transistor impedances over that decade bandwidth...the combination causing variation of phase over bandwidth of that stage. That phase shift won't affect their linearity or introduce any distortion and probably doesn't affect harmonic content due to slight deviation from linear response.

I'm not saying that broadband negative feedback is impossible, just that it can be rather difficult to achieve in reality. I've seen it done with octave bandwidth amplifiers after considerable work of measurement, calculation, trials, and some replacement of amplifier transistors that went into oscillation. :-)

The usual method of feedback-to-improve-linearity is envelope detection with the detected RF magnitude used to control gain. That greatly reduces phase shift problems but does not yield a true negative feedback situation. Envelope detection works only on the magnitude component of gain.

>Getting adequate phase margins would be a challenge and may require
>using UHF power transistors for adequate fT, which would make the
>design quite costly. Is there other ways to get adequate phase margins
>when the output transistor fT is only slightly above the required
>frequency range ?

It's not a truism that the active devices have a very high f-sub-t. What really counts is the overall amplifier phase shift which can be adjusted internally to fit within a 0 to 90 degree margin going up in frequency. That's why I mention the op-amp devices and circuits. Their phase shifts are published and it is relatively easy to derive an equivalent electronic analogue of their internals so that a full circuit with feedback can be analyzed.

To apply negative feedback requires thinking in both open-loop (no feedback) and closed-loop (with feedback) conditions.

In a simple push-pull RF linear, there's an input transformer and an output transformer and the variation of impedance of the

single pair of RF transistors well below their f-sub-t limit. Add in simple networks for (some) input matching and the open-loop phase shift can vary quite a bit over the total bandwidth. That's not always reproducible after given just the transformer and transistor and component information...the whole amplifier must be measured for both gain magnitude and phase across its band AND beyond band limits.

>After all negative feedback is used in some receiver front end designs
>to get a high IP3 value with a reasonable power consumption. Modified
>audio amplifiers with a feedback loop are also used on the 135 kHz
>band.

Comparing narrow-band examples with broadband things is a bit like comparing pineapples and kumquats. They are both edible but the similarity stops there. :-)

In narrowband circuits a single resonant circuit will set the phase shift positively to a -90 to 0 to +90 degree change going across the desired frequency from well below to well above it. The magnitude of maximum power transfer is very related to phase shift so the overall open-loop response is predictable for applying negative (phase) feedback. Way below to way above resonance have reproducible 90 degree shifts.

Narrowband circuits using filters with many stages ("poles, zeroes" of response) are going to play all sorts of nasty games with you if feedback is applied around the filter. A filter can have MANY full-circle phase shifts across its designed bandwidth. Negative feedback around such circuits with filters having multiple phase rotations within their bandwidth will be next to impossible.

There are definite limits of feedback application in narrowband systems (such as 135 KHz), usually dictated by the specific circuits.

Broadband linear amplifiers would be a different case in design and application. Open-loop response can be measured in both magnitude and phase, but few amateurs have the equipment to do so at RF. A feedback network of passive devices can be designed and checked analytically without fancy test equipment. If open-loop frequency response is known and feedback network response is know, analysis can fairly accurately predict the closed-loop amplifier response.

Len Anderson
retired (from regular hours) electronic engineer person

3281. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 21:15:06 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <ajjdbvgk73ajbj99hepld3nvlct1r81q7p@4ax.com>
Source record: 35784

In <87fzntzf2m.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>willfull_buck@yahoo.com (john s) wrote:
>>
>>>About two weeks ago, a co-worker brought a frequency counter to my
>...
>>>Could someone please give me a circuit that would jam these
>>>transmitters?
>>
>>The first step is not to jump to conclusions.
>>
>>The second step is to use headphones with your scanner to prevent feedback. If
>>you still get what sounds like feedback, it's probably not a bug at all, but
>>likely just some computer noise. OTOH, if you hear office noises from the
>>scanner then your best course of action is to contact the FCC immediately.
>
>The FCC has no jurisdiction unless the transmitters are illegal
>due to license requirements. That is very unlikely.

The FCC has sole jurisdiction to determine if the devices are legal.

>The FBI and the local police who enforce State laws have
>jurisdiction,

It is their jurisdiction to determine that the devices, if legal, are being used
legally. The FCC is the agency to contact because they will contact any other
agency that may be using the devices and confirm their legal use, and do so
without interfering with any investigation that may be happening.

> but one needs to be *very* sure of what is going
>on first.

Very true.

> Second, you need to realize that while a monitoring
>device may be illegal, it is also true that the police agencies
>have murders to investigate too. Your place on their priority
>list might be a bit lower than ensuring the men's washroom is
>properly cleaned by the janitorial crew.
>
>>However, if you want to pinpoint the source yourself, you can use the squelch
>>knob on your scanner to locate the source of these signals. Turn up the squelch
>>until the signal just cuts out, then walk around the office until it kicks in
>>again. Repeat this several times and eventually you will be able to narrow down
>>a small area. Then remove the antenna and you should be able to pinpoint the

>>source. It will probably be leakage from a cheap computer case.
>
>Stop and think about how to locate the device first. If it is
>in fact a monitor, you do *NOT* want to give away the fact that
>it has been located. That is true even if you have already
>spilled the beans loudly that you know it exists.
>
>Find it. Then *watch* it. If somebody tries to remove it,
>bingo, you then know who put it there.

Good idea. But it might be hard to watch it 24/7. He may need to install his own electronic surveillance...:-\

>>But assuming your scanner indicates that you have a bug: As someone else stated,
>>they may have been put there by the boss. They may also have been put there by a
>>business competitor. What I find strange is the frequency -- commercially
>>available bugs don't usually use VHF Public Safety Pool freqs, they are almost
>>always in the FM broadcast band or high in the UHF spectrum, and the Feds use
>>stuff in the tens of Gigahertz. So there is a possibility that the bugs (if they
>>exist) were planted by local law enforcement. Another possibility is that they
>>are the tools of a techno-stalker. So before you embark on a bug-hunt, first
>>consider all the possibilities and their consequences.
>
>And consider whose feet you are stomping on by going public with
>it. Almost regardless of who put it there, finding it is going to
>raise some kind of a stink. You want to be well prepared legally,
>and politically, before the shit hits the fan.
>
>The most important advice is SHUT UP. Stop talking loudly and stop
>posting to Usenet!

The original post raised some suspicions. Like, who brings a freq counter to work? Was it show-and-tell day at the office? And why 155.700? And why a jammer and not get the bugs removed? And posting through Google with a Yahoo email addy? Really, it sounds like someone is either trolling or wants to jam police freqs for less-than-honorable purposes. But I'll give him the benefit of the doubt, for now.

>If going to the boss didn't get even a raised eyebrow for a
>response, he is almost certainly either too dumb to talk, or was
>well aware that it existed and knows who put it there and why.
>In other words, the OP is already probably in hot water.
>
>>BTW, jamming is not an option because of the possibility that the bugs are
>>legal, in which case you could get popped by the FCC for causing harmful
>>interference, and maybe even for obstruction of justice. Not only that, but you
>
>That is off the scale of concerns. Jamming can be done very
>legally.

Not on PSP freqs. That's a guaranteed method to land you in some really hot water, not just with the FCC but with local law enforcement as well.

> For example, playing a loud radio in the room with it
>sitting right next to the bug is "jamming", and legal. As far
>as RF, you'd need to know where the _receiving_ end is, so trying
>to use RF jamming isn't likely to effective.
>
>>will be building a jammer that screws with Safety Pool freqs (Fire, Police,
>>Ambulance, etc), which could endanger lives. Let the FCC handle it.
>
>There are effective ways to handle it, and the FCC isn't likely
>to be any part of it (unless it is in an FCC office!).

Don't count on it. The FCC responds very quickly to RFI on PSP freqs. They also
respond quickly to any possible illegal electronic surveillance.

>But just what the effective ways are depends totally on just where
>this bug is, who put it there, and who is being monitored... none
>of which have been disclose and none of which the OP should be even
>whispering about in any place like Usenet.
>
>(I've had the most unusual experience of actually finding a
>wiretap in the work place, calling the FBI, talking to lawyers
>about it, and surviving the politics that resulted. The result
>was one technician immediately transfered to an engineering slot
>to protect him from union backlash, one supervisor fired seven
>months later, one manager fired one year later, and one VP let
>loose two years later.)

A perfect example of the FBI's incompentence.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3282. Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 21:37:22 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3EB6D992.7D7C10DD@ispwest.com>
Source record: 35786

Does anyone in this group know the RCA remote protocol ? Or a URL I can
go to for such information ???...

I have several RCA remotes Direct TV... VCR Audio System...
all the remotes operate all the other devices (SORT OF)

Thanks

Ted in Atlanta KD4EE

3283. Re: WTD: ½" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 22:06:07 UTC
From: n9pt <nutmeg@w-link.net>
Message-ID: <3EB6E04F.2FAA66DD@w-link.net>
Source record: 35785
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I generally pick up an old radio from a thrift store; they go for a
song. Take out what you need and chuck the rest away.

Pete/N9PT

Michael Slattery wrote:

> Wanted:
> Half inch diameter ferrite rods. Must be at least six inches long.
> Willing to pay good money. I'm in Sheffield, UK. Please telephone
> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.
>
> via
> --
> wildbear@bigfoot.com

3284. Re: ¼" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 23:02:32 UTC
From: mike <mike-g7bnf@nospam.co.uk>
Message-ID: <%7Cta.4011$XL3.2494@newsfep1-gui.server.ntli.net>
Source record: 35787
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

try a search for Mainline Electronics, they do lots of that stuff
normally ex surplus & cheap quantity & they do barter.

mike

"Michael Slattery" <delete@source.com> wrote in message
news:tl9dbv8q67l7opi4cn1p4udn6nn900i4uk@4ax.com...
> Wanted:
> Half inch diameter ferrite rods. Must be at least six inches long.
> Willing to pay good money. I'm in Sheffield, UK. Please telephone
> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.
>
> via
> --
> wildbear@bigfoot.com

3285. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 23:20:52 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305051520.f74967a@posting.google.com>
Source record: 35788

willfull_buck@yahoo.com (john s) wrote in message
news:<7722f36c.0305042118.4177a2@posting.google.com>...
> About two weeks ago, a co-worker brought a frequency counter to my
> office. Just for fun I turned it on and 155.700mhz displayed. Next day
> we tuned a scanner to that frequency...Feedback City. Five other
> offices have the same situation on slightly different frequencies.

Lessee...counters aren't particularly sensitive, so the signal is
strong. You can find it easily with a little field strength meter,
I'd guess, 'specially if you have one with a tuneable preselector.
But if "Feedback City" means you get an audio squeal that goes away
just like squeal in a PA system as you turn down the volume, then just
monitor it for a while using headphones or at very low volume and see
whose voices come through the loudest...they will be the ones closest
to it. Shouldn't take you long at all to figure out where it is (they
are).

Doesn't seem like the right freqs, but do you folks use cordless
headsets? (Bad idea if you're handling sensitive info, by the way.)

Cheers,
Tom

3286. Re: Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-05 23:55:30 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <tRCta.5372$DT1.3034@fe08.atl2.webusenet.com>
Source record: 35790

Ted, try this link at Google for info an RCA remote codes.

http://www.google.com/search?hl=en&ie=UTF-8&oe=UTF-8&q=RCA+universal+remote+codes

HTH

--
73,
Chuck
KE4ETH
USA-NA

"tk" <gamach1@ispwest.com> wrote in message
news:3EB6D992.7D7C10DD@ispwest.com...
> Does anyone in this group know the RCA remote protocol ? Or a URL I can
> go to for such information ???...
>
> I have several RCA remotes Direct TV... VCR Audio System...
> all the remotes operate all the other devices (SORT OF)
>
> Thanks
>
> Ted in Atlanta KD4EE
>

3287. Re: Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 00:04:07 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <C0C3DA9415FC607A.B26EF709BEE4A1C1.BFC90EC86F076A04@lp.airnews.net>
Source record: 35598

Chuck, you traditionally answer this kind of question with "Google is your FRIEND." and then give him the search string and the best hit.

Like http://www.thompsontv.com/rcarc.html

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message news:tRCta.5372$DT1.3034@fe08.atl2.webusenet.com...
> Ted, try this link at Google for info an RCA remote codes.
>
>
http://www.google.com/search?hl=en&ie=UTF-8&oe=UTF-8&q=RCA+universal+remote+codes
>
> HTH
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "tk" <gamach1@ispwest.com> wrote in message
> news:3EB6D992.7D7C10DD@ispwest.com...
> > Does anyone in this group know the RCA remote protocol ? Or a URL I can
> > go to for such information ???...
> >
> > I have several RCA remotes Direct TV... VCR Audio System...
> > all the remotes operate all the other devices (SORT OF)
> >
> > Thanks
> >
> > Ted in Atlanta KD4EE
> >
>
>
>

3288. Re: Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 00:27:51 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <bkDta.4158$3f7.3465020@newssvr28.news.prodigy.com>
Source record: 35789

Definitely check out Midwest Surplus Electronics. I live in the
area and it is my *favorite* store.

Bruce Raymond
ND8I

"ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
news:d4xta.50181$3h5.1412282@news2.east.cox.net...
> Well, Most of the ham-type shops will be at the hamvention.
>
> Surplus Electronics:
>
> My favorite is Midwest Surplus Electronics on Main St in Fairborn, OH --
> just outside Wright Patterson AFB.
>
> Also, Mendelsohn is downtown on 2nd St (?).
>
> And, you will be just down the road (approx 70 miles) from Fair Radio in
> Lima, OH..
>
> What did I miss?
>
>
> Larry Keith
> KQ4BY
>
>
> "John Mortlock" <heads@global.freeserve.co.uk> wrote in message
> news:b962tn$5d6$1@news8.svr.pol.co.uk...
> > While visiting Dayton are there any Ham shops or Surplus electronics
> outlets
> > nearby ?
> >
> > Thanks,
> > John G3UGY
> >
> >
>
>

3289. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 00:56:19 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <Xns9372B67AEFB0Bpookster@129.250.170.96>
Source record: 35793

willfull_buck@yahoo.com (john s) wrote in news:7722f36c.0305042118.4177a2
@posting.google.com:

> We let the boss know, but he thinks we are watching too much X-files.
>

Either:

1. The boss is the one who planted it. No boss would ignore a strange bug
in an office that handled sensitive records.

-or-

2. Your post is a troll.

I lean toward #2.

--
Bill Turner
W7TI

3290. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 00:59:57 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EB7090D.4010605@bellsouth.net>
Source record: 35791

john s wrote:
> About two weeks ago, a co-worker brought a frequency counter to my
> office. Just for fun I turned it on and 155.700mhz displayed. Next day
> we tuned a scanner to that frequency...Feedback City. Five other
> offices have the same situation on slightly different frequencies.
>
> We let the boss know, but he thinks we are watching too much X-files.
> The company I work for handles a lot of personal info. Peoples SS#,
> date of birth, ect.
>
> I could call the police, but that might get me fired. I just thought
> if we could block the transmitters that might make it safer.
>
> Could someone please give me a circuit that would jam these
> transmitters?

Now this reminds me of a story involving police radar. Seems one day
they gave a speeding ticket to someone who worked for the FCC. After
the police asked to see his driver's license, he asked to see THEIR license
to operate a RADAR TRANSMITTER (the police department didn't have
one). The ticket got thrown out of court (in fact EVERY speeding ticket
issued that month got thrown out of court!).
I forget the name of the city involved. (Though Miami FL did have a problem
with police radar about 20 years ago. Seems they tracked some houses going
over the speed limit!).

3291. Re: Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 01:19:25 UTC
From: k9sqg@aol.com
Message-ID: <20030505211925.04685.00000693@mb-m06.aol.com>
Source record: 35792

Yes, Mendleson's Electronics (larger) in downtown Dayton, maybe on 2nd street (?), and Midwest Surplus Electronics (smaller) in Fairborn...nice to have indoor shops when we have bad weather...

3292. Re: Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 01:26:15 UTC
From: Leroy <lgetz@hotmail.com>
Message-ID: <XaEta.273210$vs.21881875@news3.calgary.shaw.ca>
Source record: 35794

You might try these guys. They have a lot of info on remotes and how to program them.
groups.yahoo.com/group/jp1/

"tk" <gamach1@ispwest.com> wrote in message news:3EB6D992.7D7C10DD@ispwest.com...
> Does anyone in this group know the RCA remote protocol ? Or a URL I can
> go to for such information ???...
>
> I have several RCA remotes Direct TV... VCR Audio System...
> all the remotes operate all the other devices (SORT OF)
>
> Thanks
>
> Ted in Atlanta KD4EE
>

3293. W9GR Quantics DSP - Want

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 01:59:59 UTC
From: D & B Rude <brewman@merr.com>
Message-ID: <zGEta.102$XG.104950@kent.svc.tds.net>
Source record: 35795

Hello,
I have had the pleasure of using one of W9GR's early DSP units, and although I like it's performance it's a bit cumbersome and would like to find a used DSP III either assembled or unassembled. The unit is no longer available because TI no longer makes the main IC he uses in the heart of the unit. Replys to my email would be greatly appreciated. Thanks
Dave
KA9SRU

3294. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 02:43:21 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znm0yeuu.fld@barrow.com>
Source record: 35796

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87fzntzf2m.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>>The second step is to use headphones with your scanner to prevent feedback. If
>>>you still get what sounds like feedback, it's probably not a bug at all, but
>>>likely just some computer noise. OTOH, if you hear office noises from the
>>>scanner then your best course of action is to contact the FCC immediately.
>>
>>The FCC has no jurisdiction unless the transmitters are illegal
>>due to license requirements. That is very unlikely.
>
>The FCC has sole jurisdiction to determine if the devices are legal.

The devices being legal is irrelevant!

>>The FBI and the local police who enforce State laws have
>>jurisdiction,
>
>It is their jurisdiction to determine that the devices, if legal, are being used
>legally. The FCC is the agency to contact because they will contact any other
>agency that may be using the devices and confirm their legal use, and do so
>without interfering with any investigation that may be happening.

Why would the FCC contact another agency regarding the use of a
legal (or illegal for that matter) device?

>>>BTW, jamming is not an option because of the possibility that the bugs are
>>>legal, in which case you could get popped by the FCC for causing harmful
>>>interference, and maybe even for obstruction of justice. Not only that, but you
>>
>>That is off the scale of concerns. Jamming can be done very
>>legally.
>
>Not on PSP freqs. That's a guaranteed method to land you in some really hot
>water, not just with the FCC but with local law enforcement as well.

But nobody said a word about jamming PSP freqs. You are imagining
things here that are not necessarily the scenario that would be
effected.

>> For example, playing a loud radio in the room with it
>>sitting right next to the bug is "jamming", and legal. As far
>>as RF, you'd need to know where the _receiving_ end is, so trying
>>to use RF jamming isn't likely to effective.
>>
>>>will be building a jammer that screws with Safety Pool freqs (Fire, Police,
>>>Ambulance, etc), which could endanger lives. Let the FCC handle it.

>>
>>There are effective ways to handle it, and the FCC isn't likely
>>to be any part of it (unless it is in an FCC office!).
>
>Don't count on it. The FCC responds very quickly to RFI on PSP freqs. They also
>respond quickly to any possible illegal electronic surveillance.

I don't agree with your opinion.

>>But just what the effective ways are depends totally on just where
>>this bug is, who put it there, and who is being monitored... none
>>of which have been disclose and none of which the OP should be even
>>whispering about in any place like Usenet.
>>
>>(I've had the most unusual experience of actually finding a
>>wiretap in the work place, calling the FBI, talking to lawyers
>>about it, and surviving the politics that resulted. The result
>>was one technician immediately transfered to an engineering slot
>>to protect him from union backlash, one supervisor fired seven
>>months later, one manager fired one year later, and one VP let
>>loose two years later.)
>
>A perfect example of the FBI's incompentence.

You are going off the deep end with fantasy on every part of
this. The above has *nothing* to do with the FBI's competence
or lack thereof. Nothing above suggests that it does, though
the facts that clearly prove that it doesn't were not part of
the above description. The FBI did a marvelous job! That was
true simply because even though there was never any clear
indication that Federal law had been broken, the FBI made an
effort to investigate it well enough to be positive. In fact,
no Federal law was broken! But the FBI's presence kept the
company sitting still long enough for other factors to keep them
from going off half cocked (which they definitely would have if
the FBI had backed out in 10 minutes instead of 2 days).

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3295. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 02:46:02 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87vfwoyeqd.fld@barrow.com>
Source record: 35597

Bill Turner <noway@nohow.com> wrote:
>willfull_buck@yahoo.com (john s) wrote in news:7722f36c.0305042118.4177a2
>@posting.google.com:
>
>> We let the boss know, but he thinks we are watching too much X-files.
>>
>
>Either:
>

0. The boss is a complete idiot.

>1. The boss is the one who planted it. No boss would ignore a strange bug
>in an office that handled sensitive records.
>
>-or-
>
>2. Your post is a troll.
>
>I lean toward #2.
>
>--
>Bill Turner
>W7TI

You're probably right.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3296. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 03:43:37 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <9bbebv493034u8v37tg706374eovi81ulm@4ax.com>
Source record: 35599

On 05 May 2003 21:03:56 GMT, averyfineman@aol.com (Avery Fineman)
wrote:

>In article <rqrbbvs74gcs6sn9fn16754vtiga61g8d4@4ax.com>, Paul Keinanen
><keinanen@sci.fi> writes:

>>Would it be practical to design a broadband (say 1-30 MHz) amplifier
>>with negative feedback ?

> Theoretically it is possible. Practicality is another matter.

Thank you very much for the detailed description, I did not realise
that even the passive matching transformer would cause so much phase
shifting.

>>After all negative feedback is used in some receiver front end designs
>>to get a high IP3 value with a reasonable power consumption. Modified
>>audio amplifiers with a feedback loop are also used on the 135 kHz
>>band.
>
> Comparing narrow-band examples with broadband things is a bit
> like comparing pineapples and kumquats. They are both edible
> but the similarity stops there. :-)

I was referring to grounded base "noiseless feedback" amplifiers with
emitter and collector feedback windings on the same core e.g. "A High
Dynamic-Range MF/HF Receiver Front End" QST February 1993 p.73.

The audio power amplifiers I was referring to were Mosfet audio power
amplifiers from Maplin or BT with nominal audio power in the 300 W
range delivering over 100 W in the European 73 and 135 kHz bands. None
of the suggested changes would make these amplifier narrow-band
amplifiers.

While both the receiver front end and the audio power amplifier
operate with a limited set of frequencies, the amplifiers are them
selves broadband, since no bandpass frequency selective network is
within the feedback loop.

Paul OH3LWR

3297. Re: ½" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 05:38:13 UTC
From: Joe Pritchard <joe.pritchard@btclick.com>
Message-ID: <b97ho4kve1@sparta.btinternet.com>
Source record: 35600
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Michael Slattery" <delete@source.com> wrote in message
news:tl9dbv8q67l7opi4cn1p4udn6nn900i4uk@4ax.com...
> Wanted:
> Half inch diameter ferrite rods. Must be at least six inches long.
> Willing to pay good money. I'm in Sheffield, UK. Please telephone
> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.
>
> via
> --
> wildbear@bigfoot.com

Is Peter Tankard any relation to Paul Tankard? I'm currentkly working with him at HBOS!

Best bet apart from raiding old radios (actually, don't hold up much hope there...most little transistors seem to use short rods or ferrite bars. The only old transistor sets I've seen with the long bars have been almost collectors pieces...:-)

Keep an eye on places like Bull Electrical in Brighton or there's a place in Handsworth, Sheffield, whose name escapes me. And in Sheffield might be worth giving Bardwells a ring.

Joe

3298. Re: ¼" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 08:07:37 UTC
From: "Gareth (G1LVN)" <gareth@mycallsign.freeserve.co.uk>
Message-ID: <b97qil$4hu$1@newsg4.svr.pol.co.uk>
Source record: 35601
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Joe Pritchard" <joe.pritchard@btclick.com> wrote in message
news:b97ho4kve1@sparta.btinternet.com...

>
> Best bet apart from raiding old radios (actually, don't hold up much hope
> there...most little transistors seem to use short rods or ferrite bars. The
> only old transistor sets I've seen with the long bars have been almost
> collectors pieces...:-)

You can glue them together, this works quite effectively.

--
73 de G1LVN
Gateway details at: www.g1lvn.org.uk
(change "mycallsign" to reply by email)
send spam to abuse@theplanet.net

3299. Re: Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 09:33:24 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3EB78164.1ADCB198@ispwest.com>
Source record: 35602

Thanks for quick response... what I am looking for is the bit structure of the IR output from an RCA RCU800 remote control.

Chuck/KE4ETH wrote:

> Ted, try this link at Google for info an RCA remote codes.
>
> http://www.google.com/search?hl=en&ie=UTF-8&oe=UTF-8&q=RCA+universal+remote+codes
>
> HTH
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "tk" <gamach1@ispwest.com> wrote in message
> news:3EB6D992.7D7C10DD@ispwest.com...
> > Does anyone in this group know the RCA remote protocol ? Or a URL I can
> > go to for such information ???...
> >
> > I have several RCA remotes Direct TV... VCR Audio System...
> > all the remotes operate all the other devices (SORT OF)
> >
> > Thanks
> >
> > Ted in Atlanta KD4EE
> >

3300. minicircuit web site ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 10:28:11 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EB78E3B.6020508@wanadoo.fr>
Source record: 35603

Hi ,
i am searching about web site minicircuit to find specs of mixers , etc ....
73's
Serge
f5jtm

3301. old 'Hambrew" article

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 11:14:58 UTC
From: Neil@eaglesnest.net
Message-ID: <Pine.LNX.4.30.0305060706010.994-100000@debian>
Source record: 35604

Greeting
I used to subscribe to Hambrew and sadly they are now gone....so are most
of my back issues. I am looking for an article in one of them that
featured a DSB rig built for 80m by a fellow I believe was from the
Netherlands. If anyone has that issue, I wonder if I could get a
copy of the article? Replies can be direct.
Thanks es 72-
de wa4chq (neil)

****
_ _ _ _ _ _
/ \ / \ / \ / \ / \ / \
(W | A | 4 | C | H | Q)rp----> Linux DEBIAN 3.0 <----
****

3302. Re: Way OT

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 11:42:02 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <MrQta.17898$QX.14690@fe02.atl2.webusenet.com>
Source record: 35614

True. But, things happen when six-year-old is wanting to go to
cartoonnetwork.com now.

--
73,
Chuck
KE4ETH
USA-NA

"John R. Strohm" <strohm@airmail.net> wrote in message
news:C0C3DA9415FC607A.B26EF709BEE4A1C1.BFC90EC86F076A04@lp.airnews.net...
> Chuck, you traditionally answer this kind of question with "Google is your
> FRIEND." and then give him the search string and the best hit.
>
> Like http://www.thompsontv.com/rcarc.html
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:tRCta.5372$DT1.3034@fe08.atl2.webusenet.com...
> > Ted, try this link at Google for info an RCA remote codes.
> >
> >
>
http://www.google.com/search?hl=en&ie=UTF-8&oe=UTF-8&q=RCA+universal+remote+
> codes
> >
> > HTH
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> > "tk" <gamach1@ispwest.com> wrote in message
> > news:3EB6D992.7D7C10DD@ispwest.com...
> > > Does anyone in this group know the RCA remote protocol ? Or a URL I
can
> > > go to for such information ???...
> > >
> > > I have several RCA remotes Direct TV... VCR Audio System...
> > > all the remotes operate all the other devices (SORT OF)
> > >
> > > Thanks
> > >
> > > Ted in Atlanta KD4EE

> > >
> >
> >
> >
>
>

3303. Re: old 'Hambrew" article

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 11:47:00 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EB7A0B4.6050802@wanadoo.fr>
Source record: 35605

optimist 80 ?
http://home4.swipnet.se/~w-41522/qrproot.html

73's
serge / f5jtm

3304. Re: old 'Hambrew" article

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 12:01:07 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EB7A403.5080002@wanadoo.fr>
Source record: 35606

other dsb rig 80m :
http://www.g3ycc.karoo.net/80dsb.htm

3305. MC12017

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 12:25:38 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3EB7A9C2.C5B60F7C@neicoltech.org>
Source record: 35607

Hi gang,
I'm looking for a few motorola MC12017 prescaler chips. Anyone have
some they want to dispose of? Tnx.

Bob WB0POQ

3306. Re: minicircuit web site ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 12:29:29 UTC
From: samsvl@nlr.nl
Message-ID: <Xns9373936A8CA0Fsamsvlnlrnl@137.17.128.14>
Source record: 35608

Serge <poissondanlo@wanadoo.fr> wrote in
news:3EB78E3B.6020508@wanadoo.fr:

> Hi ,
> i am searching about web site minicircuit to find specs of mixers , etc
> .... 73's
> Serge
> f5jtm
>
>

www.minicircuits.com

Sam

3307. Motorola MRF150 originals available

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 13:10:28 UTC
From: oh8jep <apo@kotinet.com>
Message-ID: <b98caelcr1@plaza.suomi.net>
Source record: 35609

Hello!

Anyone interested in brand new original Motorola mosfets
MRF-150,I have some pieces in sale,at least 4 pieces.

73 de Aatos OH8JEP

if requested please emails to oh8jep@kotinet.com

3308. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 13:28:25 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znm0w6fa.fld@barrow.com>
Source record: 35610

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>Floyd Davidson <floyd@ptialaska.net> wrote:
>>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>>>
>>>>The FCC has no jurisdiction unless the transmitters are illegal
>>>>due to license requirements. That is very unlikely.
>>>
>>>The FCC has sole jurisdiction to determine if the devices are legal.
>>
>>The devices being legal is irrelevant!
>
>It's very relevant. 155.700 is specifically allocated for use by police (PP),

Nothing yet has suggested that the device was not put there by
police...

>and if someone is building and/or selling "bugs" that are strong enough to ring
>up a freq counter then they are probably exceeding Part 15 specs. That ain't

If, if, if... But there is no indication that it isn't legal.

>legal. It could also be a serious problem should they interfere with police
>communication. Like, what if someone was using bugs like these in a building

If it is interfering with police communications, don't you think
the police would have called in the FCC, or a technical
consultant, to determine what the cause is?

>>>It is their jurisdiction to determine that the devices, if legal, are being used
>>>legally. The FCC is the agency to contact because they will contact any other
>>>agency that may be using the devices and confirm their legal use, and do so
>>>without interfering with any investigation that may be happening.
>>
>>Why would the FCC contact another agency regarding the use of a
>>legal (or illegal for that matter) device?
>
>Hmmm... maybe to "confirm their legal use, and do so without interfering with
>any investigation that may be happening"?

If the FCC determined that the device was legal, they have no
reason at all to call in another agency. If they determine the
device is illegal, they have whatever authority is needed.

>>But nobody said a word about jamming PSP freqs. You are imagining
>>things here that are not necessarily the scenario that would be
>>effected.
>

>155.700 is indeed a PSP freq.

And nobody has suggested jamming 155.700. Mostly because that
would be relatively useless and there are better ways.

>>>> For example, playing a loud radio in the room with it

'Nuf said.

>>>Don't count on it. The FCC responds very quickly to RFI on PSP freqs. They also
>>>respond quickly to any possible illegal electronic surveillance.
>>
>>I don't agree with your opinion.
>
>It is your right to disagree. However, I was speaking from experience. Maybe the

Maybe you happen to live next door to the only active FCC Field
Office in the entire US. I've been in the business for nearly
half a century, and I've seen exactly two field reps that were
not inside an FCC office.

Getting an FCC field rep to even answer a telephone in Alaska
would be damned difficult, much less finding one that would
travel anywhere to look at a suspected "bug" in someone's office!

>field agents in my area are more gung-ho than in your district, but I have
>personally witnessed several cases of interference with the PSP, and two cases
>of suspected illegal electronic surveillance. The FCC responded quickly in every
>case (and quite harshly with the moron that was deadkeying on the police freqs).

On the other hand, I've seen interference on PSP frequencies go
on for *weeks* with no response from the FCC.

>You found a wiretap and the FBI decided that there was no law being violated? If
>the wiretap was legal, why were three people eventually fired? If it wasn't

You need to pay very close attention to what is and what is not
stated, and stop assuming that you imagination is correct.

I said no Federal law was violated. That is true.

An Alaska State Statute was violated. But, as I also mention,
the Alaska State Troopers have murders to investigate. I'd also
point out that AST has engaged in a number of illegal wiretaps
themselves, and has yet to *ever* investigate anyone for illegal
wiretaps! That includes the Fairbanks newspaper that tape
recorded a cell phone conversation (which also just happened to
have an illegal AST wiretap on it too!) and then printed the
conversation verbatim on the front page! It was hilarious, but
there was no prosecution for illegal wiretaps, to be sure. (The
party of interest, however, is in jail forever. He was
convicted of murder, which he confessed to in the tapped
telephone conversation. No evidence of either wiretap was put
before the court though!)

Whatever, the FBI found they had no jurisdiction in the wiretap mentioned previously. The State Troopers would not have been interested either, and were not notified (to my knowledge). However, there is little doubt that what happened was not according to Company Policy, was not appropriate in a number of ways, and that the company could not continue to use management people who did not understand that well enough to have avoided the problem to start with.

I'll give you a very broad hint of the type of problems this incurs. Lets say Company A does business with Company B, and Company B has a representative visiting Company A during a period of time when Company A is tape recording their telephone lines. That means they will be monitoring the business transactions of Company B when the visiting representative makes calls either to his home officer or to other companies that he deals with, including competitors to Company A.

Now, replace the name Company B with the name of the 2nd largest manufacturer of telecommunications equipment in the world, and guess what kind of a telephone call they would make if their security people heard about a wiretap that may or may not have recorded their business transactions? They did make that call.

>legal, why didn't the FBI do anything? And why did you need to talk to lawyers?

Because I am not a lawyer. I can read the Statutes about as well as anyone, but I'm not dumb enough to think that is sufficient to understand how the law is going to affect such a situation. I spent all of $50 for an attorney to look it up and explain it to me. It was worth every penny, because I then knew *exactly* which buttons *not* to push. If you think that VP didn't talk to his General Counsel, or that he didn't catch on very quickly to the fact that I was only pushing the right buttons, you'd be wrong. In fact, when made did make a statement to the employees, it was well dotted with references to lawyers and potential law suits by employees, none of which he named.

>Did the company threaten you for discovering a wiretap? Was it their wiretap?

Why do you think the whole chain of command from a line supervisor to a VP ended up changing jobs? Do you really think none of them wanted to see me to the door? ;-)

Heh heh, why do you think they resorted to a wiretap in the first place! ;-)

>Not only that, but the original post was asking about wireless bugs, which falls
>under the jurisdiction of the FCC. What does wiretapping have anything to do
>with wireless bugs? Your story lacks consistency and relevance.

You seem to lack the ability to focus on what is relevant.

Wireless bugs and wiretaps are not precisely the same, but your
civil rights are the same in both cases. And that, not Federal
law, is the significance of finding a bug in your office.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3309. wanted Heathkit PSU

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 13:53:58 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3ebabe5a.12237539@news.freeserve.co.uk>
Source record: 35611

Hi
I wonder if anyone has an old Heathkit PSU
HW-13 or HW-23 sitting unloved and unwanted
in their shack?
If so I'd be very interested to hear from you...
cheers
from Ron

3310. Free Heathkit list buy, sell, trade info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 14:34:08 UTC
From: Gary Wood <docky@earthlink.net>
Message-ID: <AJPta.56689$ey1.5223595@newsread1.prod.itd.earthlink.net>
Source record: 35612

--
Trade info, buy or sell Heathkit items, using heathkits.com's Heathkit
list. simple send an e-mail to majordomo@heathkits.com and in the body type
subscribe. Heathkits.com also offers e-mails with
(yourcallletters)@heathkits.com give your e-mails a lot of clout with your
call at heathkits.com for only 25 cents a month... thanks Gary K&#65533;IMJ
heathkits.com

3311. Re: minicircuit web site ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 14:37:59 UTC
From: Serge <poissondanlo@wanadoo.fr>
Message-ID: <3EB7C8C7.3010500@wanadoo.fr>
Source record: 35613

hi Sam ,
yes , i am a donkey ,
i have forgoten "s" of minicircuits .....
73's
Serge

3312. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 17:07:01 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <Xns937366EA46B9Apookster@129.250.170.85>
Source record: 35616

Floyd Davidson <floyd@ptialaska.net> wrote in
news:87znm0w6fa.fld@barrow.com:

>>155.700 is indeed a PSP freq.
>
> And nobody has suggested jamming 155.700. Mostly because that
> would be relatively useless and there are better ways.
>

The original poster wanted to obtain equipment to jam that frequency. I suspect the "bug" story was false. He just wants to jam that frequency for whatever reason and the bug story was a fabrication to make us think his reason was legitimate.

Crooks are so often dumb. That's why the jails are full of 'em.

--
Bill Turner
W7TI

3313. Re: MC12017

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 17:13:35 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <33Sta.141658$ja4.6546241@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35615

Hi Bob,
Those chips don't seem to be available new, but I think that some places still have them available surplus. I have some surface mount ones on hand. Figure $5.00 each, shipping included. I've only got 10 of them on hand, so I would like to keep some of them.

Pete

Bob Liesenfeld <robert.liesenfeld@neicoltech.org> wrote in message news:3EB7A9C2.C5B60F7C@neicoltech.org...
> Hi gang,
> I'm looking for a few motorola MC12017 prescaler chips. Anyone have
> some they want to dispose of? Tnx.
>
> Bob WB0POQ

3314. FS: Old Radio-Related Books, 1930's - 1980's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 17:53:40 UTC
From: oldbooks78@aol.com
Message-ID: <20030506135340.04869.00001040@mb-m05.aol.com>
Source record: 35617

I currently have the following old radio-related books for sale. Postage is $2.50 for the first book, and $1 for each additional item (Media Mail within the US, at cost elsewhere). The books are:

Jordan, Edward C.; Paul H. Neilson; William Carl Osterbrock; Fred H. Pumphrey, Lynne C. Smeby "Fundamentals of Radio" Prentice-Hall, 1945. Twelth printing. The 400 page hardbound book is in very good condition, clean with no page tears or pen marks. A nice early text on radio design and principles of operation, including a few fold-out schematics. Price: US$ 10.00

Everitt, William Littell "Communication Engineering" McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the science of the radio. Price: US$ 9.00

Frost, J..M. (Editor) "World Radio TV Handbook, The Authorative Directory of International Radio and Television (Volume 39, 1985)" Billboard Publications, 1985. The 600 page softbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name and date at the top of the Table of Contents. Price: US$ 4.00

Measurements Development Laboratory of the Sperry Gyroscope Company "Microwave Transmission Design Data" Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Price: US$ 7.00

Worldwide Publications "White's Radio Log, Vol. I, Number I" Worldwide Publications, c1982. The 136 page softbound book is in good+ condition, clean with no page tears or pen marks. Not dated, but looks to be from the early 1980's. A directory of North American AM, FM, and TV stations including world-wide shortwave stations. Price: US$ 3.00

American Radio Relay League "The A.R.R.L. Antenna Book" American Radio Relay League, 1960. Nineth edition. The 320+ page softbound book is in good condition. The covers show some wear from previous use, there are a few bent page tips, and there is a previous owners address label inside the front cover. A good solid reading copy of this informative text on radio antenna technology. Price: US$ 5.00

Federal Telephone and Radio Corporation "Reference Data for Radio Engineers" Federal Telephone and Radio Corporation, 1950. Third edition. The 640+ page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. A nice early edition of this classic radio reference data text. Price: US$ 9.00

Beam, Robert (editor) "A Dictionary of Electronic Terms" Allied Radio, 1959. Soft Cover. The softbound 80 page book is in very good condition, clean except for a previous owners name marked out inside the front cover. Concise definitions of words used in radio, television and electronics. Price: US$ 2.00

Institute of Radio Engineers "Proceedings of The Institute of Radio Engineers, October 1933" Institute of Radio Engineers, 1933. Volume 21, Issue Number 10. The approximately 200 page softbound book is in good+ condition, clean with no page tears or pen marks. Some moisture discoloration to the spine area paper, but not too bad, and not affecting the inside pages. Includes a foldout-out figure of oscillogram readings. Price: US$ 8.00

Institute of Radio Engineers "Proceedings of The Institute of Radio Engineers, December 1937" Institute of Radio Engineers, 1937. Volume 25, Issue Number 12. The approximately 200 page softbound book is in good+ condition, clean with no page tears or pen marks. Some minor wear to the spine paper, but not bad at all. Page tips in rear lower corner bent outwards somewhat. Price: US$ 8.00

Institute of Radio Engineers "1933 Report of the Standards Committee of The Institute of Radio Engineers" Institute of Radio Engineers, 1933. The 225 page softbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name on the front cover. Some wear to the spine paper, but not too bad. Page tips in rear lower corner bent outwards somewhat. A neat look at standards development for the radio in the early 1930's. Price: US$ 8.00

US War Department "Technical Manual - Radio Fundamentals, TM 11-455" U.S. GPO, 1941. The 140 page softbound book is in fine condition, fresh and clean inside and out except for a previous owners name on the front cover. A nice WWII vintage radio manual. Price: US$ 10.00

Or, all of the above for $75 post paid. If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

3315. Re: Tx filtering

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 18:49:12 UTC
From: averyfineman@aol.com
Message-ID: <20030506144912.16173.00000274@mb-m28.aol.com>
Source record: 35618

In article <9bbebv493034u8v37tg706374eovi81ulm@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 05 May 2003 21:03:56 GMT, averyfineman@aol.com (Avery Fineman)
>wrote:
>
>>In article <rqrbbvs74gcs6sn9fn16754vtiga61g8d4@4ax.com>, Paul Keinanen
>><keinanen@sci.fi> writes:
>
>>>Would it be practical to design a broadband (say 1-30 MHz) amplifier
>>>with negative feedback ?
>
>> Theoretically it is possible. Practicality is another matter.
>
>Thank you very much for the detailed description, I did not realise
>that even the passive matching transformer would cause so much phase
>shifting.

I didn't specify any values. Those values may or may not vary
so the only way to know is to measure the component by
itself, the driving and driven stages, and how they are when
all connected.

A schematic diagram alone doesn't help on that.

>>>After all negative feedback is used in some receiver front end designs
>>>to get a high IP3 value with a reasonable power consumption. Modified
>>>audio amplifiers with a feedback loop are also used on the 135 kHz
>>>band.
>>
>> Comparing narrow-band examples with broadband things is a bit
>> like comparing pineapples and kumquats. They are both edible
>> but the similarity stops there. :-)
>
>I was referring to grounded base "noiseless feedback" amplifiers with
>emitter and collector feedback windings on the same core e.g. "A High
>Dynamic-Range MF/HF Receiver Front End" QST February 1993 p.73.

A grounded-base, grounded-gate, or grounded-grid isn't exactly
a "negative feedback" amplifier. That will have some phase
shift variation over a decade of frequency.

I was using the generic amplifier form throughout. There can be
so-called "exceptions to a given rule" but the "exception" here
is probably not any true exception (I haven't seen that so I can't
comment with any accuracy on it).

The Conditional: If this "noiseless feedback grounded-base" amplifier works when reproduced with all stated components (no substitutions), then the designer has either compensated for phase shifts in the basic no-feedback circuit with opposite phase shifts in "transformer feedback windings" or simply lucked out.

RF transformers (and many AF transformers) ARE going to exhibit variation in phase shift over their normal operating frequency range. How much or how little will depend on configuration, core material, winding number, and a bunch of other smaller factors. In general, RF transformers of the toroidal or "binocular" type (beads in a line, windings threaded through center hole, in pairs) should generally have little phase shift, probably not more than 10 degrees or so (not an absolute only a rule of thumb from experience).

Problem is, a generic two-stage amplifier, push-pull each, will no doubt have three broadband transformers. The open-loop phase shift, input to output, is going to be the sum of all the individual phase shifts. Applying negative feedback around all of them, means the feedback network MUST compensate for all the open-loop shifts. If it doesn't, one can wind up with a power oscillator that has positive feedback, not negative. Failure to compensate for quadrature-value shifts (near 90 degrees) in open-loop response can result in NO feedback effect when the loop is closed!

Go back to the op-amp situation for the "no effect" condition, look at data sheets which show various amounts of feedback percentage versus frequency response. Where the open-loop gain approaches unity...and where the internal phase shift gets close to quadrature... the closed-loop gain is almost the same as open-loop. The cause is BOTH magnitude and phase shift of open-loop values with an essentially resistive feedback network (very little phase shift by itself) for closed-loop response.

There's no sure, a priori way to determine that a particular coupling in an amplifier is exactly 0 or 180 degrees in phase shift. Usually it is close to either value. How much variation there really is has to be measured. But, there can be a trap waiting to close on you if you start substituting parts such as high f-sub-t transistors in place of those specified in an article and then apply negative feedback by some means. A gain of greater than unity with a feedback phase near 0 degrees will result in an oscillator...and the oscillation may very well be at a frequency higher than you can observe with home equipment. Those higher frequency f-sub-t transistors can boogie on out to a wider bandwidth than most workshop instruments can sense.

Chances are, you WILL observe something if the fed back amp pops into oscillation even if you can't detect the RF directly. That will probably be seen as way too much distortion. That can trick one into assumptions such as the bias is set wrong...which may not be the case at all.

I was trying to point out that negative feedback applied in any RF amplifier is open to a lot more variables to mess it up than an audio range "high-fidelity" amplifer. Resistors in the AF and near-AF range are going to look pretty much like resistors. Those same resistors can have series inductance and parallel capacitance at higher RF. They aren't ideal components at those frequencies.

>The audio power amplifiers I was referring to were Mosfet audio power
>amplifiers from Maplin or BT with nominal audio power in the 300 W
>range delivering over 100 W in the European 73 and 135 kHz bands. None
>of the suggested changes would make these amplifier narrow-band
>amplifiers.

If these amplifiers are ALREADY wideband AND of good linearity, why consider them for added negative feedback?

>While both the receiver front end and the audio power amplifier
>operate with a limited set of frequencies, the amplifiers are them
>selves broadband, since no bandpass frequency selective network is
>within the feedback loop.

Okay, so you've not got any selective thingies in them. Many existing low-level RF amplifiers DO have such things. I was stating general cases. One begins with general cases to start understanding them, then it can narrow to specific cases.

The very same cautions on feedback apply to positive feedback, the ones where an oscillator is the end result. Get too much phase variation over the tuning range and the output power varies with frequency...or it may show more instability at one tuning end versus the other...as two examples only.

Look at a simple regenerative detector, around almost as long as vacuum tubes have existed. There's almost always a regeneration control in them. That's because the positive feedback phase shift AND magnitude isn't flat across its tuning range. Again, an example to point out something, not a specific in all situations.

At RF you can't just "apply feedback" without knowing and thinking more about open-loop response than at AF. That's true whether the feedback is supposed to be negative or supposed to be positive. RF has lots more variables in a circuit that schematics don't show directly. Those variables get larger with increasing frequency.

After working with a lot of different circuits at RF, both successes and failures, one can develop lots of "rules of thumb" that are good beginnings for any design or modification. Just the same, the real world still requires knowing the open-loop response FIRST. At RF that requires knowing both magnitude and phase values.

Len Anderson
retired (from regular hours) electronic engineer person

3316. Re: Balanced ATU ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 20:10:26 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <b994rj$g13$1@news7.svr.pol.co.uk>
Source record: 35619

JGBOYLES wrote:

>>A balanced antenna
>
> Dang it, a balanced antenna, should read a balanced tuner. Sorry.
> 73 Gary N4AST

Hi Guys !

Thanks for the info ...
I'm hoping to have this loop on air at the weekend !

Cheers!

MikeT ...
M0AWS

3317. Re: W9GR Quantics DSP - Want

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-06 22:55:55 UTC
From: Skipp <signsaysdspisnotthedope@yahoo.com>
Message-ID: <b99ehriui1@woodrow.ucdavis.edu>
Source record: 35620

You can also contact Dave w9gr direct. He has a web page and did have an
ad in QST.
cheers
skipp

: D & B Rude <brewman@merr.com> wrote:
: Hello,
: I have had the pleasure of using one of W9GR's early DSP units, and although
: I like it's performance it's a bit cumbersome and would like to find a used
: DSP III either assembled or unassembled. The unit is no longer available
: because TI no longer makes the main IC he uses in the heart of the unit.
: Replys to my email would be greatly appreciated. Thanks
: Dave
: KA9SRU

3318. Re: ¼" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 01:12:04 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vbgnbfbiriuv1d@corp.supernews.com>
Source record: 35621
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Try LY2KW in Vilnius, Lithuania...
he sells Soviet surplus on ebay..
I got ten ~9/32" x 6 1/4" for a bout $20.00..
hank wd5jfr
"Michael Slattery" <delete@source.com> wrote in message
news:tl9dbv8q67l7opi4cn1p4udn6nn900i4uk@4ax.com...
> Wanted:
> Half inch diameter ferrite rods. Must be at least six inches long.
> Willing to pay good money. I'm in Sheffield, UK. Please telephone
> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.
>
> via
> --
> wildbear@bigfoot.com

3319. 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 01:28:31 UTC
From: rfload <rfload@yahoo.com>
Message-ID: <b99ni7$1rl$1@newshost.mot.com>
Source record: 35622

Anybody know where to find 80m am transceiver circuit?

Thanks

3320. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 02:56:28 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <z0OdnQE8VpV36CWjXTWcpg@ctc.net>
Source record: 35623

"rfload" <rfload@yahoo.com> wrote in message
news:b99ni7$1rl$1@newshost.mot.com...
> Anybody know where to find 80m am transceiver circuit?
>

Solid state or tubes ?

For tubes look at some of the older (say before 1966) ARRL handbooks from
ebay.

3321. Re: ¼" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 03:23:05 UTC
From: Steve Terry <g4wwk-remove-to-reply-@tesco.net>
Message-ID: <GZ_ta.4551$LQ2.104415@newsfep4-glfd.server.ntli.net>
Source record: 35624
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:vbgnbfbiriuv1d@corp.supernews.com...
> Try LY2KW in Vilnius, Lithuania...
> he sells Soviet surplus on ebay..
> I got ten ~9/32" x 6 1/4" for a bout $20.00..
> hank wd5jfr
>
But they do glow in the dark, and Al-Qaida will offer you good money
for them to go in their dirty bomb ;-)

Steve Terry

3322. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 05:00:18 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b9a3t2moi1@freenet9.carleton.ca>
Source record: 35625

"Ralph Mowery" (rmowery@ctc.net) writes:
> "rfload" <rfload@yahoo.com> wrote in message
> news:b99ni7$1rl$1@newshost.mot.com...
>> Anybody know where to find 80m am transceiver circuit?
>>
>
> Solid state or tubes ?
>
> For tubes look at some of the older (say before 1966) ARRL handbooks from
> ebay.
>
>
Well a transceiver would have been rare for AM. Transceivers didn't
really become common on HF until SSB came along (thought for VHF it
was a different matter). The only commercial rig that comes to mind
was the Gonset.

Homebrew, it would have been, with few exceptions, separate transmitters
and receivers. I can picture a few mobile units, where a converter
was packaged in the same box as an AM transmitter. And maybe a few
times when a transmitter and receiver were packaged together for
mobile or portable operation. However, these weren't the transceivers
of today, and the only shared circuitry would have been the power supply,
and maybe the audio section.

Michael VE2BVW

3323. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 05:33:12 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <B4F1F079DFB507B8.3FA446391A34BAF1.1B4A0D486A40B1B2@lp.airnews.net>
Source record: 35626

"rfload" <rfload@yahoo.com> wrote in message
news:b99ni7$1rl$1@newshost.mot.com...
> Anybody know where to find 80m am transceiver circuit?

I don't think I've EVER seen an Ancient Modulation transceiver circuit for 80m. I've seen a few DSB circuits: here's one http://www.qrp.pops.net/willy.htm.

Seriously, in this day and age, DSB transceivers are trivial, almost simpler than AM, and SSB transceivers only require the addition of a crystal filter to kill one sideband. Or see the Phillips (sp?) NE602 app note on Weaver (phasing) SSB generation.

3324. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 06:56:46 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <chbhbv8striuc48utrmlkigtkj1a2hoqcr@4ax.com>
Source record: 35627

In <Xns937366EA46B9Apookster@129.250.170.85>, Bill Turner <noway@nohow.com>
wrote:

>Floyd Davidson <floyd@ptialaska.net> wrote in
>news:87znm0w6fa.fld@barrow.com:
>
>>>155.700 is indeed a PSP freq.
>>
>> And nobody has suggested jamming 155.700. Mostly because that
>> would be relatively useless and there are better ways.
>>
>
>The original poster wanted to obtain equipment to jam that frequency.

I thought that much was obvious, but it seems Floyd missed the original post.
For that reason I think I'll avoid the impending flame war.

> I
>suspect the "bug" story was false. He just wants to jam that frequency for
>whatever reason and the bug story was a fabrication to make us think his
>reason was legitimate.

That's my conclusion as well. His NNTP host (24.206.97.209) comes back to the
Birmingham news server for Earthlink. Since that server covers nearly the whole
state, I just went to the FCC search page and input 155.700 + AL, and presto, up
pops about half a dozen law enforcement agencies licensed for base/mobile on
that freq. The sad thing is that he probably got the info he asked for anyway
from some paranoid, anti-government jello-head that read the post.

>Crooks are so often dumb. That's why the jails are full of 'em.

The smart crooks run for public office.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3325. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 07:18:03 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <8765onns2c.fld@barrow.com>
Source record: 35628

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <Xns937366EA46B9Apookster@129.250.170.85>, Bill Turner <noway@nohow.com> >wrote:
>>The original poster wanted to obtain equipment to jam that frequency.
>
>I thought that much was obvious, but it seems Floyd missed the original post.
>For that reason I think I'll avoid the impending flame war.

What the OP wanted, and what we've been discussing, are two
distinctly separate things.

I addressed email to the OP regarding his post, with very little
advice and a couple of rather pertinent questions and the
comment that nothing further would be coming without
verification of the answers.

He did not respond, and I take that to mean that my original
suspicions (and yours too) were correct.

However, you and the OP are not a dichotomy. You can both be
wrong.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3326. Re: minicircuit web site ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 07:21:15 UTC
From: samsvl@nlr.nl
Message-ID: <Xns93745F27AA77FsamsvlnlrnI@137.17.128.14>
Source record: 35629

Serge <poissondanlo@wanadoo.fr> wrote in news:3EB7C8C7.3010500@wanadoo.fr:

> hi Sam ,
> yes , i am a donkey ,
> i have forgoten "s" of minicircuits .....
> 73's
> Serge
>
>
Hi Serge,

I am old ... so I have to write down everything :-))

Sam

3327. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 08:10:13 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Fb3ua.72494$cO3.4761318@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35630
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

I do know what you mean about using that equipment, but I am not promoting a Spectrum Analyzer design on my website.....only the noise source. The noise source can be built for around 25 dollars. I have compared the flatness of response to my NoiseCom NC6112, and up to about 1.5GHz, the results are very similar.

Pete

<nospam@nouce.bellatlantic.net> wrote in message news:3eb436fb.2828341369@news.bellatlantic.net...
> On Sat, 03 May 2003 19:09:10 GMT, "Pete KE9OA"
> <n.gianakopoulos@worldnet.att.net> wrote:
>
> >That spectrum analyzer is an especially handy tool. It not only allows you
> >to see the spectral purity of your oscillators, but, when used with a noise
> >source, it allows you to see the frequency response of filters. I have just
> >such a noise source design posted up on my website. It is a modified
> >version of the ARRL circuit, but with RF amplification following the noise
> >diode, so you can have about 0dBm of RF power across the spectrum.
>
> Indeed it is. Also expensive to purchase and you have to understand
> it to make sanse of the results. Building one is nearly as complex as
> the SSB tranceiver task.
>
> An aside, while I've had access to one I've done a large amount of
> design and construction without it. There are ways to evaluate
> circuits without a spectrum analyser. A good book on exactly this is
> Experimental Methods in RF Design ARRL costs 35$ but is a excellent
> reference and has a lot of already published work in one place. It's
> also rather light on math for the phobes.
>
> Allison
> KB1GMX

3328. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 08:11:55 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <fd3ua.72496$cO3.4761178@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35631
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

I wish you well on that project, Dwight. It is fun! Feel free to give me a shout, if you have any questions along the way.

Pete

Dwight Stewart <stewart@say.net> wrote in message news:BADA44EB.19D3F%stewart@say.net...
> "Richard Hosking" wrote:
> >
> > As others in this thread have pointed out,
> > you have chosen a challenging task.
>
>
> The challenge is the fun (with learning the goal).
>
>
> > I have always found the first challenge to
> > designing radio gear is to have good test
> > equipment to see what is going on.
>
>
> I'm prepared to spend a reasonable amount of money to purchase the
> equipment I'll need. Assuming I don't have to buy the most expensive of
> everything, nothing in the equipment catalogs shocked me. I also have some
> minor experience with various test equipment.
>
>
> > I suggest as others have pointed out - adopt
> > a building block approach, and wherever
> > possible get rid of variables that you can
> > control, so that you know what the final
> > result is.
>
>
> Thanks for the various suggestions. I'll keep them in mind.
>
>
> > You might be able to get a surplus FM rig
> > that can be modified to amateur bands if
> > you dont want to build your own.
>
>
> Actually, my first idea was to purchase a basic SSB kit and try building
> it up from there by adding capabilities. I may still do that.

>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>

3329. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 09:01:11 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <ieehbv0bkv093dk579katl5fhi609bv69r@4ax.com>
Source record: 35632

I understand that you probably don't have much to do up there until the snow
melts, but don't count on me to keep you occupied by arguing this subject.
Regardless, I'll try and make my point as clear as possible. If you can't
understand it, that's your problem.

In <8765onns2c.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>In <Xns937366EA46B9Apookster@129.250.170.85>, Bill Turner <noway@nohow.com> >wrote:
>>>The original poster wanted to obtain equipment to jam that frequency.
>>
>>I thought that much was obvious, but it seems Floyd missed the original post.
>>For that reason I think I'll avoid the impending flame war.
>
>What the OP wanted, and what we've been discussing, are two
>distinctly separate things.

The OP asked for help to build a device that will jam radio transmissions on a
specific frequency. That much should be obvious by now. However, the discussion
became about what to do if you find that you are bugged with wireless devices.
First, there is the question of legality. From the CFR Title 47:

Sec. 2.701 Prohibition against use of a radio device for eavesdropping.
(a) No person shall use, either directly or indirectly, a device
required to be licensed by section 301 of the Communications Act of
1934, as amended, for the purpose of overhearing or recording the
private conversations of others unless such use is authorized by all of
the parties engaging in the conversation.
(b) Paragraph (a) of this section shall not apply to operations of
any law enforcement officers conducted under lawful authority.

Sec. 15.9 Prohibition against eavesdropping.
Except for the operations of law enforcement officers conducted
under lawful authority, no person shall use, either directly or
indirectly, a device operated pursuant to the provisions of this part
for the purpose of overhearing or recording the private conversations of
others unless such use is authorized by all of the parties engaging in
the conversation.

Now, assuming someone finds a radio device being used for eavesdropping. The FCC
is the first agency to contact because it is their responsibility to determine
if the above regulations are not being violated. Notice that there are two parts
to these regulations: First, the device must be an authorized radio device,
which is clearly the sole jurisdiction of the FCC. Second, they may only be used
by "law enforcement officers conducted under lawful authority". That phrase, or
anything like it, doesn't appear in any other federal regulation, and therefore

the sole jurisdiction AGAIN rests with the FCC. So even if the devices ARE legal, it is up to the FCC to see that they are being used "under lawful authority". That means they must contact any and all law enforcement agencies within that jurisdiction and determine if the devices are being used legally.

So in your own words, "'Nuf said."

But apparently not, because then you interjected with wiretapping, which is not the same as wireless bugs simply because a wiretap doesn't necessarily involve radio. The FCC doesn't have jurisdiction over wiretapping UNLESS it involves wireless communication. If the wiretaps do not use radio devices then the jurisdiction falls onto the state, not the FBI. Now the FBI becomes involved when the wiretapping (and wireless eavesdropping, for that matter) are used in the commission of an interstate (federal) crime....

IOW, you have to know what crime is being violated before you can determine jurisdiction, and therefore contact the appropriate agency. Evidently, you don't know the difference.

>I addressed email to the OP regarding his post, with very little
>advice and a couple of rather pertinent questions and the
>comment that nothing further would be coming without
>verification of the answers.
>
>He did not respond, and I take that to mean that my original
>suspicions (and yours too) were correct.
>
>However, you and the OP are not a dichotomy. You can both be
>wrong.

So can you, Floyd. Don't forget that.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3330. Re: Motorola MRF150 originals available

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 10:10:10 UTC
From: John Regnault <john.regnault@bt.con>
Message-ID: <b9am62$k8r$1@pheidippides.axion.bt.co.uk>
Source record: 35633

"oh8jep" <apo@kotinet.com> wrote in message
news:b98caelcr1@plaza.suomi.net...
> Hello!
>
> Anyone interested in brand new original Motorola mosfets
> MRF-150,I have some pieces in sale,at least 4 pieces.
>
> 73 de Aatos OH8JEP
>
> if requested please emails to oh8jep@kotinet.com
>
>

3331. re: DSB for 80

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 11:04:29 UTC
From: Neil@eaglesnest.net
Message-ID: <Pine.LNX.4.30.0305070655190.1250-100000@debian>
Source record: 35634

Hello Serge-
thanks for the info, however that was not the one I was looking for. It
was from 'Hambrew', date....about 1994-98?? and he used a homebrew
diode mixer....like I said, I believe he was from the Netherlands.
I believe the rx was direct conversion.....
72
Neil wa4chq

****

```
_ _ _ _ _ _
/ \ / \ / \ / \ / \ / \
( W | A | 4 | C | H | Q )rp----> Linux DEBIAN 3.0 <----
```

****

3332. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 11:17:52 UTC
From: rfload <rfload@yahoo.com>
Message-ID: <b9aq38lma1@newshost.mot.com>
Source record: 35635

i am looking for a solid state xcvr circuit, but a separate xmtr & rcvr is
ok.anyway, thanks for the info.

cheers

henoch
"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
news:b9a3t2moi1@freenet9.carleton.ca...
> "Ralph Mowery" (rmowery@ctc.net) writes:
> > "rfload" <rfload@yahoo.com> wrote in message
> > news:b99ni7$1rl$1@newshost.mot.com...
> >> Anybody know where to find 80m am transceiver circuit?
> >>
> >
> > Solid state or tubes ?
> >
> > For tubes look at some of the older (say before 1966) ARRL handbooks
from
> > ebay.
> >
> >
> Well a transceiver would have been rare for AM. Transceivers didn't
> really become common on HF until SSB came along (thought for VHF it
> was a different matter). The only commercial rig that comes to mind
> was the Gonset.
>
> Homebrew, it would have been, with few exceptions, separate transmitters
> and receivers. I can picture a few mobile units, where a converter
> was packaged in the same box as an AM transmitter. And maybe a few
> times when a transmitter and receiver were packaged together for
> mobile or portable operation. However, these weren't the transceivers
> of today, and the only shared circuitry would have been the power supply,
> and maybe the audio section.
>
> Michael VE2BVW
>

3333. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 13:03:33 UTC
From: Le Grande Raoul <raoul@olympus.net>
Message-ID: <070520030603339963%raoul@olympus.net>
Source record: 35636
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

In article
<fd3ua.72496$c03.4761178@bgtnsc04-news.ops.worldnet.att.net>, Pete
KE9OA <n.gianakopoulos@worldnet.att.net> wrote:

> I wish you well on that project, Dwight. It is fun! Feel free to give me a
> shout, if you have any questions along the way.

Glad this thread hasn't devolved into a shouting war....

When I first read the thread, I couldn't rmember the name of a book to
recommend. Now, I have it before me...

ARRL's latest, "Experimental Methods in RF Design" by Wes Hayward,
W7ZOI, Rick Campbell, KK7B and Bob Larkin, W7PUA may be what this
fellow wants.

The book is a replacement for the earlier Hayward book some have
mentioned already. It take the reader who has a basic working
knowledge of electronics to a more advanced level. There are practical
examples of all sorts of circuits and concepts. In fact, the book has
a full description of the design and building of a 2 meter SSB
trasceiver. It's not a "step-by-step' instruction manual but rather a
book which uses project to illustrate design concepts.

I think it's what the original poster is looking for. The price is a
little steep at $49.95 (with a CD-ROM full of docs and software) but
looks to be worth it. Get it at www.arrl.com.

73

Jeff KB7AIL

3334. Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 14:00:26 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3EB9117A.F9EF73D8@neicoltech.org>
Source record: 35637

Howdy folks,
In the past I have used permanent magic marker to draw tracks on a
board, but have never been satisfied with the durability of this ink
under enchant.
Any suggestions on a better pen/ink? Preferably one that can make
narrow lines. SMT is here to stay like it or not ;)

tnx es 72
Bob WB0POQ

3335. rare klystron tube r9760

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 14:23:40 UTC
From: harryhydro@hotmail.com
Message-ID: <10e8ec27.0305070623.109008ed@posting.google.com>
Source record: 35638

Hi Folks:
Does anyone know any specs of this klystron? R9760

It's apparently made by EMI-Varian, but I contacted them and they have
no information.

Any help appreciated! Thanks!
Harry

3336. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 15:32:50 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <b9b8v2$be0$1@titan.btinternet.com>
Source record: 35639

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3EB9117A.F9EF73D8@neicoltech.org...
> Howdy folks,
> In the past I have used permanent magic marker to draw tracks on a
> board, but have never been satisfied with the durability of this ink
> under enchant.
> Any suggestions on a better pen/ink? Preferably one that can make
> narrow lines. SMT is here to stay like it or not ;)

The Staedtler Lumocolor 318 works very well, and comes with a fine point.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3337. Please look in your junkboxes: I need a feedthrough insulator. UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 16:00:32 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b9baei$hopc7$1@ID-150848.news.dfncis.de>
Source record: 35640
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,uk.radio.amateur

Have you anything like 10-76 or 10-79 in the link?

http://www.daburn.com/10-58.html

I'm in UK.

Rich.

3338. Re: Please look in your junkboxes: I need a feedthrough insulator. UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 16:25:41 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3EB9354B.3E5E5684@uwe.ac.uk>
Source record: 35641
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
>
> Have you anything like 10-76 or 10-79 in the link?
>
> http://www.daburn.com/10-58.html
>
> I'm in UK.
>
> Rich.

Dear Rich,

I seem to remember something like that in my shed somewhere. Probably a little different - AFAICR they have oval bases with two holes for mounting screws. Please contact me via this e-mail address with a real address I can e-mail to and I'll give you more details. I am a little loath to part with them.

vy 73

Andy, M3ABC, M1EBV - QTHR and qrz.com

3339. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 17:10:39 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <874r46n0mo.fld@barrow.com>
Source record: 35642

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>I understand that you probably don't have much to do up there until the snow

You probably don't understand anything at all about what there
is to do here, or not. But like everything in this thread, your
imagination is used as a substitute when in doubt.

>melts, but don't count on me to keep you occupied by arguing this subject.
>Regardless, I'll try and make my point as clear as possible. If you can't
>understand it, that's your problem.

You've missed on all counts to date, what likelihood is there
that any of this going to get through to you?

>In <8765onns2c.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>>In <Xns937366EA46B9Apookster@129.250.170.85>, Bill Turner <noway@nohow.com> >wrote:
>>>>The original poster wanted to obtain equipment to jam that frequency.
>>>
>>>I thought that much was obvious, but it seems Floyd missed the original post.
>>>For that reason I think I'll avoid the impending flame war.
>>
>>What the OP wanted, and what we've been discussing, are two
>>distinctly separate things.
>
>The OP asked for help to build a device that will jam radio transmissions on a
>specific frequency. That much should be obvious by now. However, the discussion
>became about what to do if you find that you are bugged with wireless devices.

Hence, as I said, what the OP wanted is not what we are
discussing, and is not germane.

>First, there is the question of legality. From the CFR Title 47:

What, exactly, are the criminal penalties for violation of a CFR?

Aren't we just a little more interested in the Communications Act of
1934 as ammended, and a few others from the US Code?

Here is where you can find what makes the description given by
the OP a potentially criminal case. (Note that it has virtually
nothing to do with the FCC or licensed operation of radio
equipment.) Note that this one law makes both a wiretap illegal
and makes equally illegal the use of a radio device (licensed
or otherwise) to intercept "oral" communications.

"&#65533; 2511. Interception and disclosure of wire, oral, or electronic communications prohibited

(1) Except as otherwise specifically provided in this chapter any person who--

(a) intentionally intercepts, endeavors to intercept, or procures any other person to intercept or endeavor to intercept, any wire, oral, or electronic communication;

(b) intentionally uses, endeavors to use, or procures any other person to use or endeavor to use any electronic, mechanical, or other device to intercept any oral communication when--

(i) such device is affixed to, or otherwise transmits a signal through, a wire, cable, or other like connection used in wire communication; or

(ii) such device transmits communications by radio, or interferes with the transmission of such communication; or

..."

Perhaps you should revue then entire law in detail.

http://www4.law.cornell.edu/uscode/18/2510.html

>Sec. 2.701 Prohibition against use of a radio device for eavesdropping.
> (a) No person shall use, either directly or indirectly, a device
>required to be licensed by section 301 of the Communications Act of
>1934, as amended, for the purpose of overhearing or recording the
>private conversations of others unless such use is authorized by all of
>the parties engaging in the conversation.
> (b) Paragraph (a) of this section shall not apply to operations of
>any law enforcement officers conducted under lawful authority.
>
>Sec. 15.9 Prohibition against eavesdropping.
> Except for the operations of law enforcement officers conducted
>under lawful authority, no person shall use, either directly or
>indirectly, a device operated pursuant to the provisions of this part
>for the purpose of overhearing or recording the private conversations of
>others unless such use is authorized by all of the parties engaging in
>the conversation.

So if you and I violate the above, the FCC can yank our tickets!
Whoop dee doo!

>Now, assuming someone finds a radio device being used for eavesdropping. The FCC
>is the first agency to contact because it is their responsibility to determine
>if the above regulations are not being violated. Notice that there are two parts

The FCC has _regulatory_ jurisdiction. The FBI however has
jurisdiction when a _criminal_ violation of Federal law has
occurred. If you want assistance with ensuring compliance with
the regulations, calling the FCC to have an unlicensed operator
censured and forced to comply with Federal regulations is very
much in order.

But if you want the same party charged with criminal use of that
equipment, call the FBI.

In fact, both may be involved, but the most significant
difference is that the FCC has relatively very few field
personal and they are engineers not law enforcement, while the
FBI has many and they have authority conduct criminal
investigations.

Perhaps *you* happen to live close to the only seriously active
FCC office in the country, but 200,000,000+ Americans don't.
They should contact the local FBI or other law enforcement
agencies if they want any chance at all for some kind of action.

>to these regulations: First, the device must be an authorized radio device,
>which is clearly the sole jurisdiction of the FCC. Second, they may only be used

It is the sole jurisdiction of the FCC to administrate the
authorization of said radio device. It is not the sole
jurisdiction of the FCC to deal with criminal operation of said
device.

Which do you want, a criminal investigation or a letter to the
perpetrator demanding that the device be properly licensed and
operated?

>by "law enforcement officers conducted under lawful authority". That phrase, or
>anything like it, doesn't appear in any other federal regulation, and therefore
>the sole jurisdiction AGAIN rests with the FCC. So even if the devices ARE

Your logic is a bit confused. How does that phrase give "sole"
jurisdiction to the FCC??? In fact, it does not. In fact even
you said that what the FCC would do is call in a police agency.
They will in fact call in the agency that does have jurisdiction.

And it has *nothing* to do with whether the device is license or
not.

>legal, it is up to the FCC to see that they are being used "under lawful
>authority". That means they must contact any and all law enforcement agencies
>within that jurisdiction and determine if the devices are being used legally.
>
>So in your own words, "'Nuf said."

Any police agency has exactly the same requirement. And of
course police agencies might even have people available to
investigate. How many criminal investigators does the FCC
employ full time?

>But apparently not, because then you interjected with wiretapping, which is not
>the same as wireless bugs simply because a wiretap doesn't necessarily involve
>radio. The FCC doesn't have jurisdiction over wiretapping UNLESS it involves
>wireless communication. If the wiretaps do not use radio devices then the
>jurisdiction falls onto the state, not the FBI. Now the FBI becomes involved
>when the wiretapping (and wireless eavesdropping, for that matter) are used in
>the commission of an interstate (federal) crime....

And just as obviously when the wiretap does involve radio
devices... the FCC is just as involved (and equally
unavailable).

Regardless, you did notice that CFR 47 is titled
"Telecommunications", not "Wireless Telecommunications", right?
They have exactly the same jurisdiction over non-wireless
telephone systems as they do over wireless telephone systems.

>IOW, you have to know what crime is being violated before you can determine
>jurisdiction, and therefore contact the appropriate agency. Evidently, you don't
>know the difference.

The FBI is going to have jurisdiction if there is a violation of
Federal law.

>>I addressed email to the OP regarding his post, with very little
>>advice and a couple of rather pertinent questions and the
>>comment that nothing further would be coming without
>>verification of the answers.
>>
>>He did not respond, and I take that to mean that my original
>>suspicions (and yours too) were correct.
>>
>>However, you and the OP are not a dichotomy. You can both be
>>wrong.
>
>So can you, Floyd. Don't forget that.

You were claiming that the OP being wrong makes you right. I've
not made any such claim.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3340. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 19:36:33 UTC
From: donrm@soco.agilent.com
Message-ID: <1052345191.811730@cswreg.cos.agilent.com>
Source record: 35646

Tom Bruhns <k7itm@aol.com> wrote:
>
> Lessee...counters aren't particularly sensitive, so the signal is
> strong. You can find it easily with a little field strength meter,

Try one of these neat little devices - www.zapchecker.com

Don K6LTS

3341. New KDSP2 Advanced DSP Filter for the K2

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 19:58:45 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3EB96575.2010202@elecraft.com>
Source record: 35643
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

We've just released the KDSP2 advanced DSP for the K2. Below is the KDSP2 product description.

(We have also just released three transverters (6M, 2M and 220 MHz) that work with most HF rigs and an external band decoder box for controlling antenna switches and band pass filter boxes. Instead of putting everything in one huge email I'll be posting them separately to the list.)

73, Eric WA6HHQ
http://www.elecraft.com
============

The Elecraft KDSP2 brings versatile, high-performance digital signal processing (DSP) technology to the K2 and K2/100 transceivers. The KDSP2 unit, which is fully integrated with the K2, plugs directly into the Control board. It's also very easy to assemble, with no surface mount components to install. The DSP IC and related parts are pre-installed on a small plug-in module.

The KDSP2 provides up to four user-configurable filters in each mode (CW/SSB/data), complementing the K2's variable-bandwidth crystal filter. CW filter settings include center frequency and bandwidth, with "hard" and "soft" filter algorithms and bandwidths as narrow as 50 Hz. SSB filters provide programmable low and high cutoff frequencies. Four levels of noise reduction are available in CW and SSB modes, while SSB mode includes an automatic notch filter. The KDSP2 is unique in that noise reduction and auto notch parameters can be modified to suit the operator.

Filter modes and features can be quickly accessed via the K2's DISPLAY button, while parameters adjustment is accomplished using the DSP module's own menu system. In addition, the unit's firmware is flash-based and field upgradeable. The DSP code is open-source to encourage community involvement and education.

Like our KAF2 analog audio filter module, the KDSP2 includes a real time clock/calendar with its own backup battery. This feature is especially useful during field operation, eliminating the need for a separate clock for logging or contest use. Current drain of the KDSP2 can be reduced to approximately 10 mA by placing the audio filter subsystem in bypass mode.

The DSP code for the KDSP2 is open source, allowing advanced users to create their own DSP features for the K2. User supplied alternate DSP code will be posted in a special KDSP2 download page on the Elecraft web page. (DSP source code and K2 interface link module will be placed on this web site by 6/30/03.)

The KDSP2 is priced at $219. Additional information, pictures and orders can be placed via our web page at http://www.elecraft.com . KDSP2 units will be introduced and limited quantities will be available at the Dayton Hamvention,

May 16 ï¿½ 18th (Booth 196-7). Orders placed via our web page will begin shipping within two weeks following Dayton.

3342. New XV Transverters for the K2 and most HF rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 19:59:17 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3EB96595.4040608@elecraft.com>
Source record: 35645
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Here is the transverter information. More pictures at http://www.elecraft.com

73, Eric WA6HHQ

Three state-of-the-art transverters are included in Elecraft's new XV Series: the XV50 (6 Meters), XV144 (2 Meters), and XV222 (222 MHz). The transverters can be used with nearly any transceiver that covers the 28 to 30 MHz frequency range, including Elecraft's high-performance K2 and K2/100.

The XV Series provides important benefits for the operator in both receive and transmit modes. On receive, the transverters combine a low receive noise figure (typically 0.8 dB) with a high dynamic range front end (+17 dBm mixer), ensuring exceptional weak-signal performance even in large-signal environments. Reliable overload detection is included at the IF port to protect the mixer. On transmit, the XV's 20-25 watts output will drive most high power linear amplifiers. A sequenced keying output is provided for external amplifiers, and a built-in wattmeter using a 10-segment LED bargraph provides fast power output monitoring. Provision is also made for an optional crystal oven to enhance frequency stability.

Single-port and dual-port IF connections allow use with almost any transceiver. IF transmit levels from 0 dBm to +39 dBm (1 milliWatt to 8 watts) can be accommodated, with a constant-impedance IF termination for consistent performance. Multiple transverters can be easily daisy chained to a single IF transceiver, providing multiband operation without cable rearrangement. A brightly illuminated label clearly identifies which transverter is selected.

The XV Series transverters are packaged in attractive, low-profile enclosures measuring only 1.2" (3 cm) tall, with styling that matches the Elecraft K2. The transverters are also well integrated with the K2 electrically, providing automatic band selection; independent, calibrated display of each transverter's operating frequency to 10 Hz; and front-panel power level control.

Like Elecraft's transceivers, the XV transverters are completely modular, simplifying construction and alignment. The professionally-written, fully illustrated manual will appeal to experienced as well as first-time builders. The kits are easy to assemble, featuring "no-wires" construction, and all surface-mount parts used in the kit (15 total) are pre-installed at the factory.

Price: $349.00
Availability:

Orders received now will begin shipping June 22nd. Additional information and on line ordering can be found at http://www.elecraft.com

3343. KRC2 Band Decoder For the K2 and most HF Rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 19:59:36 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3EB965A8.6090203@elecraft.com>
Source record: 35644
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Here is the information on the KRC2 band decoder.
73, Eric WA6HHQ

The Elecraft KRC2 Band Decoder is a universal, programmable station control unit that can switch any combination of antennas, filters, amplifiers, or other equipment. It supports analog, digital, and RS232 control inputs, so it's compatible with transceivers from Icom (voltage level), Yaesu (BCD), and Kenwood (serial or BCD via logging program), as well as Elecraft's own K2 and K2/100.

The KRC2 includes decoded outputs for all HF bands (including WARC bands), three transverter bands, and general accessories. High-side (source) and low-side (sink) relay drivers are included. All signal lines are RF bypassed to eliminate RFI and noise pickup.

Individual driver outputs can be "wire-ORed" as with conventional decoders. However, the KRC2 also provides a PC-based command interface, allowing the user to configure the unit with simple text commands. New firmware can even be downloaded via the internet. The combination of these features makes the KRC2 uniquely suited to the user's present as well as future station control needs.

The KRC2 is fully integrated with Elecraft's transceivers, decoding band-change data via the company's AuxBus protocol. But other unique K2 features are also supported that can be enabled or disabled with jumpers inside the KRC2. The K2's ACC menu entry can be used to directly control the KRC2's accessory outputs. Four buttons on the top of the KRC2 can be used as "hot keys" for instant access to CW message buffers, fast switching of the rig's RXANT jack, or other functions. Finally, the KRC2 can act as a complete CW-feedback interface for the K2, allowing enhanced accessibility for operators with special user interface requirements.

Packaged in an attractive, compact enclosure that is only 1.2 x 3.5 x 5.5 inches (3 x 9 x 14 cm), the KRC2 is styled to match the K2. The easy-to-build kit uses Elecraft's "no-wires" construction and is suitable for first-time kit builders.

Price: $159.00

Availability:

Orders received now via phone or via the Elecraft web site, http://www.elecraft.com , will ship the week of June 22nd.

3344. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-07 22:42:43 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3eb98c07.3177853752@news.bellatlantic.net>
Source record: 35547
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

On Wed, 07 May 2003 08:10:13 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>I do know what you mean about using that equipment, but I am not promoting a
>Spectrum Analyzer design on my website.............only the noise source.
>The noise source can be built for around 25 dollars. I have compared the
>flatness of response to my NoiseCom NC6112, and up to about 1.5GHz, the
>results are very similar.

They are indeed handy.

Allison

3345. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 01:53:51 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <Xns9374C03D4123Cpookster@129.250.170.96>
Source record: 35549

donrm@soco.agilent.com wrote in news:1052345191.811730
@cswreg.cos.agilent.com:

> Try one of these neat little devices - www.zapchecker.com
>

Gosh.... It has "Receiver Meter Technology". What will they think of next?

--
Bill Turner
W7TI

3346. FS Capacitors - etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 02:11:07 UTC
From: Lou <Tech@DP.NET>
Message-ID: <b9ceil$23t8$1@news.dp.net>
Source record: 35548

A while back, I had listed some capacitors for sale. Some oil - some dry. When I placed the first ad, unbeknownst to me, some of my stock was misplaced. I couldn't find all of my caps. I found them. Mostly electrolytic type. These are good for home brew power supply filtering. They are about 2 - maybe 5 or more inches in diameter. Some are a tad smaller than the others.

If you want a list of all the caps I have available, e-mail me direct for it. They are varying in price depending on size. Shipping will be extra and payment via Money Orders only. ALL sales final.. NO RETURNS.

Have many other items available as well Have a list, but it is added to almost daily. So if you're in need of anything - please ask. I may have it. I'm clearing out my inventory as I am looking to move.

--
Lou/Tech@DP.NET

3347. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:09:40 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADF6CE4.1A1BB%stewart@say.net>
Source record: 35550

"Zack Lau" wrote:

> You might want to look at the Electronics of
> Radio by David Rutledge, which is designed
> to teach Caltech students how the Norcal 40A
> works (40M CW transceiver). It does assume
> a good knowledge of math/physics, but I think
> it is unreasonable to expect a radio book to
> teach you everything.
>
> Experimental Methods in RF Design by Hayward,
> Campbell, and Larkin does have 6 and 2M
> transmitter designs. They present the three
> most popular methods of generating SSB--by
> filtering, phasing, and DSP.

Okay, I'm not too worried about the math. When I get lost, I have a wife with a math degree. And, yes, I've ordered the "Experimental Methods in RF Design" book. Thanks for the suggestions, Zack.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3348. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:31:20 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADF71F8.1A1BD%stewart@say.net>
Source record: 35551

"Avery Fineman" wrote:

> Several others have suggested very good books, notably
> those published by ARRL.
>
> A couple other sources are the publications of the RSGB
> (in English English...:-) www.rsgb.org and the Ham
> Radio Bookstore listings at CQ Communications Inc.
> http://ssl.sunserver.com/cq/index.ihtml
>
> An "inbetweener" source is Harry's Homebrew Homepage at
> http://w1.859.telia.com/~U85920178/
> Harry Lythall (SM0VPO) is an electronics technology
> instructor in Sweden and writes very well. He does a lot
> of simpler project construction with everything well
> illustrated in clear European-style schematics and good
> photos (of most projects). (snip)

In addition to those, a friend handed me an ancient book titled "Giant Book of Radio Projects." At least that is what he said the title was (the cover and many pages are missing). Anyway, it does have a VHF SSB receiver and transmitter project in it. The only problem would be finding modern replacements for the ancient components listed. Other than that, the project seems rather straightforward.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3349. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:33:06 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADF7261.1A1BE%stewart@say.net>
Source record: 35552
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Pete KE9OA" wrote:

> I wish you well on that project, Dwight. It is fun!
> Feel free to give me a shout, if you have any
> questions along the way.

Thanks, Pete. Rest assured that I will be back in this newsgroup if I run into anything too confusing.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3350. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:35:04 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BADF72D8.1A1BF%stewart@say.net>
Source record: 35553
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"Le Grande Raoul" wrote:

> (snip) ARRL's latest, "Experimental Methods in
> RF Design" by Wes Hayward, W7ZOI, Rick Campbell.
> KK7B and Bob Larkin, W7PUA may be what this
> fellow wants.

Several have suggested that book and it has been ordered. Thanks.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3351. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:42:22 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0305072242.75048502@posting.google.com>
Source record: 35554

"John R. Strohm" <strohm@airmail.net> wrote in message
news:<B4F1F079DFB507B8.3FA446391A34BAF1.1B4A0D486A40B1B2@lp.airnews.net>...
> Seriously, in this day and age, DSB transceivers are trivial, almost simpler
> than AM, and SSB transceivers only require the addition of a crystal filter
> to kill one sideband. Or see the Phillips (sp?) NE602 app note on Weaver
> (phasing) SSB generation.

I think DSB transceivers are significantly easier to build than SSB
transceivers. I recently built two DSB transcievers and one SSB transmitter.
See http://planeta.clix.pt/n2cqr for info on these projects.

I think the DSB rigs provide a great way for a builder of moderate experience
to get the thrill of going on the air with a completely HB rig.
It may be considered trivial, but VERY few hams have actually done it.

73 Bill CU2JL N2CQR

3352. Re: DSB for 80

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 06:44:40 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0305072244.5282cfad@posting.google.com>
Source record: 35555

```
<Neil@eaglesnest.net> wrote in message
news:<Pine.LNX.4.30.0305070655190.1250-100000@debian>...
> Hello Serge-
> thanks for the info, however that was not the one I was looking for. It
> was from 'Hambrew', date....about 1994-98?? and he used a homebrew
> diode mixer....like I said, I believe he was from the Netherlands.
> I believe the rx was direct conversion.....
> 72
> Neil wa4chq
>
> ************************************************************************
> _ _ _ _ _ _
> / \ / \ / \ / \ / \ / \
> ( W | A | 4 | C | H | Q )rp----> Linux DEBIAN 3.0 <----
> ************************************************************************
Neil: See http://planeta.clix.pt/n2cqr for a DSB rig using diode ring mixers.
```

3353. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 13:06:45 UTC
From: Heikki Ahola <heikki.ahola@vtt.fi>
Message-ID: <3EBA5664.5F408367@vtt.fi>
Source record: 35556

I have also used Staedler Lumocolor 318 Permanent Marker with very good
results once the surface is clean with no oxide, grease etc. I have tried
also other types of markers and overhead projector pens, but none of
these comes even close to the Staedler performance in this very
application. I suppose they all are just fine in their intended use, but
the PCB etchant (I use hydrochloric acid + hydrogen peroxide) is
a most hostile environment and I have long ago stopped experimentation
with other
brands.

73 de Heikki (OH2LZI)
oh2lzi@sral.fi

3354. Valve plate RF Choke.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 14:11:20 UTC
From: eniac@eniac.homelinux.com
Message-ID: <d002435e.0305080611.1ccd9875@posting.google.com>
Source record: 35557

Hello.
I have an old AM transmitter with valve.
I want to build an RF Choke for the plate of the tube, because the
transmitter's choke was destroyed. I can't find it on any store.
The ols is an air RF Choke (without core) winded on a tube of paper,
with values of 2,5 mH / 300 mA.

Does anyone knows how can i wind one myself?
Is there any calculator to find the nessecary turns for this RF Choke?

Thank you
Eniac.

P.S. i apologize for my pure English.

3355. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 14:18:27 UTC
From: Lou <Tech@DP.NET>
Message-ID: <b9dp73$2fr9$1@news.dp.net>
Source record: 35558

"Sharpies" brand markers are a good choice too... if you can get there where ever you are. I've used cheaper brands of Markers, but as was pointed out the board MUST BE CLEAN.... Lou/Tech@DP.NET

"Heikki Ahola" <heikki.ahola@vtt.fi> wrote in message news:3EBA5664.5F408367@vtt.fi...
> I have also used Staedler Lumocolor 318 Permanent Marker with very good
> results once the surface is clean with no oxide, grease etc. I have tried
> also other types of markers and overhead projector pens, but none of
> these comes even close to the Staedler performance in this very
> application. I suppose they all are just fine in their intended use, but
> the PCB etchant (I use hydrochloric acid + hydrogen peroxide) is
> a most hostile environment and I have long ago stopped experimentation
> with other
> brands.
>
> 73 de Heikki (OH2LZI)
> oh2lzi@sral.fi
>
>
>

3356. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 17:03:18 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EBA8DD6.7050100@hotmail.com>
Source record: 35559

Forget ebay, goto a hamfest and look around. I've seen handbooks from as
far back as the 40's for under $5 CDN.

Ralph Mowery wrote:
> "rfload" <rfload@yahoo.com> wrote in message
> news:b99ni7$1rl$1@newshost.mot.com...
>
>>Anybody know where to find 80m am transceiver circuit?
>>
>
>
> Solid state or tubes ?
>
> For tubes look at some of the older (say before 1966) ARRL handbooks from
> ebay.
>
>

3357. looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 17:13:40 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EBA9044.4080706@hotmail.com>
Source record: 35560

Does anyone have any suggestions about a good(inexpensive) final that
will give me about 2-3 watts DSB on 20 meters?

3358. 28v 15w rf transistors...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 18:18:46 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1052417922.222771@auth2.dns.griffin.net.uk>
Source record: 35561

looking for cheap bioplar/fet 28v 15w vhf power transistors..surplus/sh ok
as long as working..1w in..to build handheld amps...

thanks simon g0zen

3359. Re: Valve plate RF Choke.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 19:32:48 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305081132.4fda49b8@posting.google.com>
Source record: 35562

Yes, certainly you should be able to wind one yourself.

For 300mA, I would use a wire diameter about 0.2mm, but even smaller may be OK. Even 0.1mA copper wire should not melt with 1 amp of DC current, but beware of RF current heating. The problem will be the size of the coil, if you use wire that is too big, assuming you are trying to wind it as a single layer solenoid. If you have the old coil, use the same size wire as it used.

The inductance value should not be very critical. You should be able to use the simple inductance formula for a single-layer solenoid (since it sounds like that is what the original was). In English (American??) units, it's

L = (n*r)^2/(9*r+10*l)

where L is inductance in uH
r is coil radius in inches
l is coil length in inches
n = number of turns

If you use millimeters instead of inches, it is just

L = (1/25.4)* (n*r')^2/(9*r'+10*l')

where
r' is coil radius in millimeters
l' is coil length in millimeters
rest as above.

That makes for a pretty big coil, to get to 2.5 millihenries, assuming even 10 turns per millimeter. How big was the original, and was it wound as a single layer, or in "pi" sections? See picture at http://www.wilcocorp.com/catalog/wound_coils/pdf/MP.pdf if you don't know what "pi wound" means.

Cheers,
Tom

eniac@eniac.homelinux.com (eniac) wrote in message news:<d002435e.0305080611.1ccd9875@posting.google.com>...
> Hello.
> I have an old AM transmitter with valve.
> I want to build an RF Choke for the plate of the tube, because the
> transmitter's choke was destroyed. I can't find it on any store.
> The ols is an air RF Choke (without core) winded on a tube of paper,
> with values of 2,5 mH / 300 mA.

>
> Does anyone knows how can i wind one myself?
> Is there any calculator to find the nessecary turns for this RF Choke?
>
> Thank you
> Eniac.
>
> P.S. i apologize for my pure English.

3360. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 20:46:42 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <H1CdnbmazZTPXyejXTWcpw@ctc.net>
Source record: 35563

> Does anyone have any suggestions about a good(inexpensive) final that
> will give me about 2-3 watts DSB on 20 meters?
>

Look at some of the replacement transistors that are used in the CB radios.

3361. Wiring help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 22:52:16 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <AcBua.10526$JE3.590746@twister.rdc-kc.rr.com>
Source record: 35564

The rotor is an: Alliance Model 225

It uses 5 wires. One puts the control box pointer where he wants the beam, and the rotor goes there. There is no meter showing antenna position, just a red lite showing the rotor is "in transit" to a new location of the antenna. (the rotor and the antenna are un-aligned). When they again get back aligned, the red lite extinguishes.

Wiring diagram needed !

Please respond to jhilins@wi.rr.com

3362. Re: VFO won't start, help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 22:57:58 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <WhBua.259838$Si4.202463@rwcrnsc51.ops.asp.att.net>
Source record: 35565

Change the 100 pF to the gate to a 0.001 uF and if that doesn't do it, move
the tap up the coil a smidge.

W4ZCB
"Alex" <ve3leg@hotmail.com> wrote in message
news:3EBAB9AF.5030206@hotmail.com...
> I'm trying to build a 40 meter direct conversion VFO controlled
> receiver. I'm building it one block at a time so I can work out the bugs
> easier. So far I have a VFO and product detector that seem to work ok
> together except that the VFO doesn't start unless I input a strong
> signal with my signal generator to the product detector's RF input, then
> the VFO starts. The stability seems ok, but the moment I try to change
> frequency and my screwdriver touches the trimmer capacitor the VFO dies
> again and I have to input the signal again to restart it. Can any one
> give me an idea what's going wrong?
>
> The VFO is a modified (for different freq. and to use onhand parts)
> version of one appearing on page 36 figure 7 of "Solid State Design for
> the Radio Amateur" by Doug DeMaw and Wes Hayward, and I've attached the
> schematic of my version to this message. Thanks in advance for any
> hints/help.
>
>
> 73
> Alex
> VE3LEG
>

3363. FS: Drake TR-7 service manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 23:21:26 UTC
From: k9sqg@aol.com
Message-ID: <20030508192126.12789.00000031@mb-m27.aol.com>
Source record: 35566

Excellent condition TR-7 service manual, original. $30 plus shipping. Cannot ship outside continental US.

73s,

Evan

3364. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 23:29:37 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vblq3ff0msqf57@corp.supernews.com>
Source record: 35567

Just buy an old CB xcvr and you've got most of what you need..
hank wd5jfr
"Alex" <ve3leg@hotmail.com> wrote in message
news:3EBA9044.4080706@hotmail.com...
> Does anyone have any suggestions about a good(inexpensive) final that
> will give me about 2-3 watts DSB on 20 meters?
>

3365. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-08 23:32:41 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <b9er81$6fl@library1.airnews.net>
Source record: 35568

"Alex" <ve3leg@hotmail.com> wrote in message
news:3EBA9044.4080706@hotmail.com...
> Does anyone have any suggestions about a good(inexpensive) final that
> will give me about 2-3 watts DSB on 20 meters?

2N3866 I think will run about a watt. Try running two of them in push-pull.

2SC1909 is a CB final that will run 4 watts AM on 11, so it should do 2-3 on 20. They're a little hard to find, and the various CB dealers on the net typically want outrageous prices for them.

2SC1307 is an SSB CB final. You occasionally see batches of them on eBay.

3366. FA FA CLEAN OUT TIME

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 01:31:15 UTC
From: kf4toh@aol.com
Message-ID: <20030508213115.26675.00000069@mb-m04.aol.com>
Source record: 35569

im working on a dayton fund !!!!!!!
if interesred please check out

SONY IC 2001
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=3023368670

KENWOOD R 2000

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=3023385609

REGENCEY PB155A
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=3023387482

BC 70XLT
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=3023388353

ICOM IC U16A UHF RADIO
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=40066&item=3023390453

CHESS SET MADE FROM TUBES
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4675&item=3023396029

VICTOR VICTROLA V V 8-30
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=38030&item=2173877137

3367. Was: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 03:42:44 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EBB23B4.7050608@hotmail.com>
Source record: 35570

Ok, that worked great, thanks!

Now I have the opposite problem, since I got my VFO working I went on to
build the AF amp stage with an LM386N1, which is now self oscillating!
I've tried sticking capacitors everywhere and it still won't stop, it
just speeds up or slows down. Any ideas on fixing that?

Alex

P.S. I've used these chips before, never had this problem.

Harold E. Johnson wrote:
> Change the 100 pF to the gate to a 0.001 uF and if that doesn't do it, move
> the tap up the coil a smidge.
>
> W4ZCB
> "Alex" <ve3leg@hotmail.com> wrote in message
> news:3EBAB9AF.5030206@hotmail.com...
>
>>I'm trying to build a 40 meter direct conversion VFO controlled
>>receiver. I'm building it one block at a time so I can work out the bugs
>>easier. So far I have a VFO and product detector that seem to work ok
>>together except that the VFO doesn't start unless I input a strong
>>signal with my signal generator to the product detector's RF input, then
>>the VFO starts. The stability seems ok, but the moment I try to change
>>frequency and my screwdriver touches the trimmer capacitor the VFO dies
>>again and I have to input the signal again to restart it. Can any one
>>give me an idea what's going wrong?
>>
>>The VFO is a modified (for different freq. and to use onhand parts)
>>version of one appearing on page 36 figure 7 of "Solid State Design for
>>the Radio Amateur" by Doug DeMaw and Wes Hayward, and I've attached the
>>schematic of my version to this message. Thanks in advance for any
>>hints/help.
>>
>>
>>73
>>Alex
>>VE3LEG
>>
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>
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>

3368. PC Switching PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 05:17:11 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <rRGua.55937$yv1.3610876@news2.telusplanet.net>
Source record: 35571

Awhile back there was talk on here about converting the 5v output from a pc power supply to a 13 volt 20 amp supply to be used for base stations. Would anybody have information on where I could find more about this.

Gerry
VE6QLT

3369. Re: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 08:31:14 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <mHJua.781132$3D1.429352@sccrnsc01>
Source record: 35572

"Alex" <ve3leg@hotmail.com> wrote in message
news:3EBB23B4.7050608@hotmail.com...
> Ok, that worked great, thanks!
>
> Now I have the opposite problem, since I got my VFO working I went on to
> build the AF amp stage with an LM386N1, which is now self oscillating!
> I've tried sticking capacitors everywhere and it still won't stop, it
> just speeds up or slows down. Any ideas on fixing that?
>
>
> Alex
>
> P.S. I've used these chips before, never had this problem.

Well, if you've used them before, you should've found a better chip by now, however, it's coupling back thru the PSU. From the Vdd connection, place a 33 uF cap (or larger) to ground. Then a 10 ohm resistor to Vdd, and another 33 uF to ground right at the chip and resistor. ie, not back at the power supply.

W4ZCB

3370. Re: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 09:17:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vbmsh09mol743e@corp.supernews.com>
Source record: 35573

I've always had to bypass the output directly to ground with a good
quality 0.1 uF ceramic capacitor. The data sheet always specifies a
resistor in series with the bypass, but just about every one I've used
has oscillated unless bypassed directly. The direct bypass has never
caused any sort of harm or malfunction.

Roy Lewallen, W7EL

Harold E. Johnson wrote:
> "Alex" <ve3leg@hotmail.com> wrote in message
> news:3EBB23B4.7050608@hotmail.com...
>
>>Ok, that worked great, thanks!
>>
>>Now I have the opposite problem, since I got my VFO working I went on to
>>build the AF amp stage with an LM386N1, which is now self oscillating!
>>I've tried sticking capacitors everywhere and it still won't stop, it
>>just speeds up or slows down. Any ideas on fixing that?
>>
>>
>>Alex
>>
>>P.S. I've used these chips before, never had this problem.
>
>
> Well, if you've used them before, you should've found a better chip by now,
> however, it's coupling back thru the PSU. From the Vdd connection, place a
> 33 uF cap (or larger) to ground. Then a 10 ohm resistor to Vdd, and another
> 33 uF to ground right at the chip and resistor. ie, not back at the power
> supply.
>
> W4ZCB
>
>

3371. Re: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 10:53:49 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <r42nbvcccnossl3n9efehh4ubk5n5pg2nr@4ax.com>
Source record: 35574

Why not use the audio amp as the vfo and the vfo as the audio amp ?

Clive

3372. Re: Valve plate RF Choke.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 11:32:50 UTC
From: Eniac <eniac@eniac.homelinux.com>
Message-ID: <b9g3h2$1vlq$1@ulysses.noc.ntua.gr>
Source record: 35575

Thank you Tom.

I don't have the old one but i remember that it was "pi" sections.
For this type of wind, is it enough to divide the total turns to segments ?

Example :
total turns = 600
Segments = 3
turns by segment = 200 ?

Is this OK ?

Thank you.

? "Tom Bruhns" <k7itm@aol.com> ?????? ??? ??????
news:3200347.0305081132.4fda49b8@posting.google.com...
> Yes, certainly you should be able to wind one yourself.
>
> For 300mA, I would use a wire diameter about 0.2mm, but even smaller
> may be OK. Even 0.1mA copper wire should not melt with 1 amp of DC
> current, but beware of RF current heating. The problem will be the
> size of the coil, if you use wire that is too big, assuming you are
> trying to wind it as a single layer solenoid. If you have the old
> coil, use the same size wire as it used.
>
> The inductance value should not be very critical. You should be able
> to use the simple inductance formula for a single-layer solenoid
> (since it sounds like that is what the original was). In English
> (American??) units, it's
>
> L = (n*r)^2/(9*r+10*l)
>
> where L is inductance in uH
> r is coil radius in inches
> l is coil length in inches
> n = number of turns
>
> If you use millimeters instead of inches, it is just
>
> L = (1/25.4)* (n*r')^2/(9*r'+10*l')
>
> where
> r' is coil radius in millimeters
> l' is coil length in millimeters
> rest as above.
>

> That makes for a pretty big coil, to get to 2.5 millihenries, assuming
> even 10 turns per millimeter. How big was the original, and was it
> wound as a single layer, or in "pi" sections? See picture at
> http://www.wilcocorp.com/catalog/wound_coils/pdf/MP.pdf if you don't
> know what "pi wound" means.
>
> Cheers,
> Tom
>

3373. Re: PC Switching PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 12:10:31 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vbn74g55kso29b@corp.supernews.com>
Source record: 35576

Google on "St. Louis Switcher" and all will be revealed

..

"Gerry MacDonald" <gerry.macdonald@globaltv.ca> wrote in message
news:rRGua.55937$yv1.3610876@news2.telusplanet.net...
Awhile back there was talk on here about converting the 5v output from a pc
power supply to a 13 volt 20 amp supply to be used for base stations. Would
anybody have information on where I could find more about this.

Gerry
VE6QLT

3374. Re: Was: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 13:02:37 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3EBBA6ED.117BF709@cox.net>
Source record: 35577

The most simple fix is to use a 6 or 8v three terminal regulator to feed
the AF amp. This is a bit of overkill, but it does a very good job of
decoupling the amp and as worked for me in the past.

The alternative is 200 - 470 uf of bypass cap. on the chip supply
voltage.

- Dan, N7VE

Alex wrote:
>
> Ok, that worked great, thanks!
>
> Now I have the opposite problem, since I got my VFO working I went on to
> build the AF amp stage with an LM386N1, which is now self oscillating!
> I've tried sticking capacitors everywhere and it still won't stop, it
> just speeds up or slows down. Any ideas on fixing that?
>
> Alex
>
> P.S. I've used these chips before, never had this problem.
>
> Harold E. Johnson wrote:
> > Change the 100 pF to the gate to a 0.001 uF and if that doesn't do it, move
> > the tap up the coil a smidge.
> >
> > W4ZCB
> > "Alex" <ve3leg@hotmail.com> wrote in message
> > news:3EBAB9AF.5030206@hotmail.com...
> >
> >>I'm trying to build a 40 meter direct conversion VFO controlled
> >>receiver. I'm building it one block at a time so I can work out the bugs
> >>easier. So far I have a VFO and product detector that seem to work ok
> >>together except that the VFO doesn't start unless I input a strong
> >>signal with my signal generator to the product detector's RF input, then
> >>the VFO starts. The stability seems ok, but the moment I try to change
> >>frequency and my screwdriver touches the trimmer capacitor the VFO dies
> >>again and I have to input the signal again to restart it. Can any one
> >>give me an idea what's going wrong?
> >>
> >>The VFO is a modified (for different freq. and to use onhand parts)
> >>version of one appearing on page 36 figure 7 of "Solid State Design for
> >>the Radio Amateur" by Doug DeMaw and Wes Hayward, and I've attached the
> >>schematic of my version to this message. Thanks in advance for any
> >>hints/help.

> >>
> >>
> >>73
> >>Alex
> >>VE3LEG
> >>
> >
> >
> >
> > ---
> > ----
> >
> >
> >
> >
> >
> >

3375. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 19:32:23 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <8bcto-b4h.ln1@skelton.mylinuxbox.net>
Source record: 35578

John R. Strohm wrote:

> 2SC1307 is an SSB CB final. You occasionally see batches of them on eBay.

The 2SC1307 and 2SC1969 were used in a lot of SSB CB rigs.
Most of them used the 2SC2166 or 2SC1306 as the driver.

A few other numbers that come to mind: 2SC2312, 2SC1945
2SC1237.

Most PA transistors have the heat-sink tab connected to
the collector. IIRC, the 2SC1945 has the tab connected to
the emitter. This means you can usually bolt the transistor
directly to chassis/gnd without any insulation.

73, Ed. EI9GQ.

--

http://homepage.eircom.net/~ei9gq
Linux 2.4.20

3376. Re: WTB: Large electrolytics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 20:09:45 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EBC0AEE.E58030FC@bellatlantic.net>
Source record: 35579

"Christopher.Cox" wrote:
>
> Could be why he said "series".
> Problem is we do not know waht the end users operating voltage would be.
> I believe the responding party had to assume that it could be above 50
> volts.

The OP said he needed 75 WV DC - I based my response on his voltage
spec.

> Of course there should be dividing resistors and the lot.
>
> Regards
>
> John R. Strohm wrote:
> > <ehsjr@bellatlantic.net> wrote in message
> > news:3EB04EA4.294406DE@bellatlantic.net...
> > >
> > >>
> > >>Philip de Cadenet wrote:
> > >>
> > >>>I need a pair of 75 WV DC, 60'000uF electrolytic cap's.
> > >>>
> > >>>Don't wish to use many of a lower voltage and or capacitance due to lack
> > >>>of real estate.
> > >>>
> > >>>Does anyone have these lying around and for sale at reasonable money.
> > >>>
> > >>>Tnx
> > >>>--
> > >>>Philip de Cadenet G4ZOW
> > >>>Transmitters 'R' Us
> > >>>http://www.transmittersrus.com
> > >>
> > >>I don't know how much real estate you have - but BG Micro
> > >>sells a 50 v 68,000uF cap - if you can go with 34,000uF,
> > >>put 2 in series.
> > >>
> > >
> > > Uhhh, gomer, capacitors in PARALLEL add.
> > >
> > >

3377. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 20:22:47 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EBC0DFB.9A8D524B@bellatlantic.net>
Source record: 35580
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"John R. Strohm" wrote:
>
> "Dwight Stewart" <stewart@say.net> wrote in message
> news:BAD65D6C.17FCB%stewart@say.net...
> > "Roger Conroy" wrote:
> > >
> > > If you are really as raw a beginner as you claim -
> > > perhaps you should consider a kit?
> > > The good ol' guys from MFJ come to mind. No gee
> > > wizz performance but not a heap of junk either -
> > > Also very reasonably priced.
> > >
> > > "Mark Florkowski" wrote:
> > > >
> > > > Try looking at the Ten-Tec line of products they
> > > > have radios, transverters (converts 2M to 6M any
> > > > mode). Most of what Ten-Tec sells is kits .
> > >
> > >
> > > Thanks for the suggestion, both Mark and Roger. However, I've already
> > > built many kits. And while I did learn a little from those kits, it was
> > > certainly not enough to build my own VHF radio without serious guidance.
> > > There are still simply too many gaps in my knowledge about electronics. In
> > > other words, I'm still a beginner in too many areas. Because of that, the
> > > books I've seen on radio construction lose me fairly quickly. Therefore, I
> > > was hoping for a book that didn't assume so much knowledge on the part of
> > > the reader. With that, I could probably muddle my way through to a fairly
> > > basic radio.
>
> OK, the problem is that you have to learn to walk before you can learn to
> run.
>
> If you've built kits, then the next step is building from a schematic and
> parts list. I'd suggest "W1FB's Design Notebook" by Doug DeMaw W1FB/SK, as
> a good starting place. He gives several simple designs, in schematic form,
> and has some good suggestions on construction practices. Also be reading
> "Solid State Design for the Radio Amateur" by Doug DeMaw and Wes Hayward
> (nominally out-of-print but still easily available from lots of places).
>
> Plan on doing your earlier experimentation at HF rather than VHF. You can
> get away with murder at HF and things will still work. VHF is not so
> forgiving. There is a LOT of stuff to be learned before you can design your
> own VHF rig.

Agreed, and an addition: say someone else designs the vhf radio, and the design has no flaws. Never mind designing it, just plain BUILDING it can be difficult when you're new. Construction practices that won't hurt at HF can ruin a VHF/UHF circuit.

3378. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 20:43:48 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EBC12E8.AD0CF2CD@bellatlantic.net>
Source record: 35581
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

Dwight Stewart wrote:
>
> "Pete KE9OA" wrote:
>
> > I wish you well on that project, Dwight. It is fun!
> > Feel free to give me a shout, if you have any
> > questions along the way.
>
> Thanks, Pete. Rest assured that I will be back in this newsgroup if I run
> into anything too confusing.

Another suggestion: go to hamfests and look for an old 2 meter
mobile rig that needs repair. If it has the schematic and block
diagram, buy it. You'll be able to learn a lot just repairing
it. Perhaps even better - buy an old crystal controlled
scanner at a hamfest. I've seen them go for $5.00. They cover
portions of VHF and UHF, and at that price you could afford
to "put bugs" on the receiver (i.e. purposely break it) and then
learn what that does to the performance, how to diagnose
the problem, and what the individual circuit does.

>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/

3379. Re: MFJ-9606 Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 20:56:09 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EBC15CD.B9090217@bellatlantic.net>
Source record: 35582
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Giovanni wrote:
>
> I'm looking for the schematic diagram of the MFJ -9606 6m FM transceiver
> (I've got the radio without any manual and I need to repair it).
>
> Any help is appreciated.
>
> Thanks !

Download the manual (free) from
http://www.mfjenterprises.com/products.php?prodid=MFJ-9606

It does not include a schematic - but it does have a block diagram
which may help.

3380. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 21:22:13 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EBC1BE9.8B7173D8@bellatlantic.net>
Source record: 35583

Bill Turner wrote:
>
> donrm@soco.agilent.com wrote in news:1052345191.811730
> @cswreg.cos.agilent.com:
>
> > Try one of these neat little devices - www.zapchecker.com
> >
>
> Gosh.... It has "Receiver Meter Technology". What will they think of next?
>

Aw geez, Bill, you missed the best part. You get to pay $89.00
for the thing!

> --
> Bill Turner
> W7TI

3381. Re: Was: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-09 23:02:42 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EBC3392.5090401@hotmail.com>
Source record: 35584

Thanks all for the advice, I got the d#mn thing to actually amplify, and it really is mediocre. Whoever suggested I find a differant amp is 100% right, which op amps in the .5-2watt(high gain +20dB) range are best, or should I use transistors to make my own?

Alex

Alex wrote:
> Ok, that worked great, thanks!
>
> Now I have the opposite problem, since I got my VFO working I went on to
> build the AF amp stage with an LM386N1, which is now self oscillating!
> I've tried sticking capacitors everywhere and it still won't stop, it
> just speeds up or slows down. Any ideas on fixing that?
>
>
> Alex
>
> P.S. I've used these chips before, never had this problem.
>
> Harold E. Johnson wrote:
>
>> Change the 100 pF to the gate to a 0.001 uF and if that doesn't do it,
>> move
>> the tap up the coil a smidge.
>>
>> W4ZCB
>> "Alex" <ve3leg@hotmail.com> wrote in message
>> news:3EBAB9AF.5030206@hotmail.com...
>>
>>> I'm trying to build a 40 meter direct conversion VFO controlled
>>> receiver. I'm building it one block at a time so I can work out the bugs
>>> easier. So far I have a VFO and product detector that seem to work ok
>>> together except that the VFO doesn't start unless I input a strong
>>> signal with my signal generator to the product detector's RF input, then
>>> the VFO starts. The stability seems ok, but the moment I try to change
>>> frequency and my screwdriver touches the trimmer capacitor the VFO dies
>>> again and I have to input the signal again to restart it. Can any one
>>> give me an idea what's going wrong?
>>>
>>> The VFO is a modified (for different freq. and to use onhand parts)
>>> version of one appearing on page 36 figure 7 of "Solid State Design for
>>> the Radio Amateur" by Doug DeMaw and Wes Hayward, and I've attached the
>>> schematic of my version to this message. Thanks in advance for any
>>> hints/help.

>>>
>>>
>>> 73
>>> Alex
>>> VE3LEG
>>>
>>
>>
>>
>> --
>>
>> ----
>>
>>
>>
>>
>>
>>
>

3382. Re: Was: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 00:33:55 UTC
From: ricknj101@hotmail.com
Message-ID: <3ebc4868.28726921@news.optonline.net>
Source record: 35585

>The alternative is 200 - 470 uf of bypass cap. on the chip supply
>voltage.

I just built up a little LM380 amp which is similar. It was
motorboating, and like Dan said, some microfarads on the supply line
tamed it right down.
I'm going to use it on a Drake R4C which uses an archaic form of audio
amp that generates huge amounts of heat.

Rick K2XT

3383. Re: Was: VFO won't start, help! Now: Opposite problem in AF stage!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 02:13:45 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <tfZua.789145$3D1.436907@sccrnsc01>
Source record: 35586

I'd really go for the Toshiba TA-7205. It's in some older handbooks. For a couple bucks, you get 55 dB of stable gain, the ability to shape the feedback for frequency response, and as much as 6 watts out with 12 volts. Try Jameco, MPJones and some of the others. In a pinch, send me a self addressed stamped envelope.

W4ZCB

3384. HOMEBREW BAL TUNER .... FA FA FA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 03:43:41 UTC
From: kf4toh@aol.com
Message-ID: <20030509234341.06967.00000073@mb-m11.aol.com>
Source record: 35587

if interested please check it out
joe kf4toh

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4675&item=3023565179

3385. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 07:31:12 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0305092331.a58ca0f@posting.google.com>
Source record: 35588

Alex <ve3leg@hotmail.com> wrote in message news:<3EBA9044.4080706@hotmail.com>...
> Does anyone have any suggestions about a good(inexpensive) final that
> will give me about 2-3 watts DSB on 20 meters?

Alex: I'm very pleased to hear that there will soon be another
station
running QRP DSB on 20. I'm now running 1 W DSB HB solar powered on
that band.

I found that getting the final amp to run with stability was the
hardest
of the project. Here's an excerpt from an article I'm working on:

"I thought that once I had an SSB signal at 18 Mhz, RF
amplification would be the easiest part of the project.
I was wrong. As occurred with my Double Sideband rig, I had real
difficulty getting the RF amplifiers to
function with stability. As I was struggling, I came across a
comforting article by C.F. Rockey, W9SCH, in
the British QRP magazine SPRAT. OM Rockey noted that, "It is the
development of clean RF power in
appreciable quantities that is the greatest challenge in this field
for the average amateur." Amen to that,
Rock! W9CSH went on to suggest ways to surmount the difficulties,
but conceded that success is not
guaranteed: He mentioned the possible need to sacrifice chickens to
Papa Legba.
I didn't have to kill any chickens, but a 20 meter CW transmitter
was sacrificed. After several frustrating
attempts to get RF amplifiers working, I resorted to the maneuver
that I used in the Double Sideband
project: I pulled a working broadband 5 watt amplifier out of a
transmitter that I'd built several years ago
and modified it for linear service."

The circuit I ended up using can be seen in the 17 meter DSB portion
of my web site: http://planeta.clix.pt/n2cqr
It is a modification of the broadband amp used in the VXO 6 watter in
QRP
Classics.

Good luck. 73 Bill CU2JL N2CQR

3386. Re: Valve plate RF Choke.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 07:44:10 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305092344.4cd739b3@posting.google.com>
Source record: 35589

"Eniac" <eniac@eniac.homelinux.com> wrote in message
news:<b9g3h2$1vlq$1@ulysses.noc.ntua.gr>...
> Thank you Tom.
>
> I don't have the old one but i remember that it was "pi" sections.
> For this type of wind, is it enough to divide the total turns to segments ?
>
> Example :
> total turns = 600
> Segments = 3
> turns by segment = 200 ?
>
> Is this OK ?
>
> Thank you.

The exact value of the choke should be non-critical. The formula I gave is for single-layer solenoid coils, but it will give a reasonable estimate even for multiple layers like you'll have in the sections. I would say the number of turns you suggest is reasonable, if your former is about 12mm diameter and the overall span of the segments is around 25mm. Try winding up one and see what inductance you get. It may take a little practice to get the pi winding right. If you don't have a ready way to make an inductance measurement, try resonating the choke with a capacitor and find the resonant frequency, and calculate the inductance from that. It may take a couple trials to get it right, but that's part of what homebrewing is about. Good luck with your project.

Cheers,
Tom

3387. Re: Heathkit E-MAILS

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 10:47:30 UTC
From: jsn35 <28@47.com>
Message-ID: <ZM4va.928$bc1.363@newsfep1-gui.server.ntli.net>
Source record: 35590

Hello,

I doubt the company would like people appearing to represent them. Anyway,
in the UK the word "clout" does actually mean something different. Well,
if you know who Chubby Brown is it does.

Geoff.

"Gary Wood" <gary@heathkits.com> wrote in message
news:Qm%ua.63987$ey1.5733202@newsread1.prod.itd.earthlink.net...
>
>
> --
> You can have you e-mail come to (yourcall)@heathkits.com Give you e-mails
> some clout! Let them know you are really a Heathee! ONLY $.25 A MONTH
> limited time no set-up fee Gary K IMJ k0imj@heathkits.com
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.478 / Virus Database: 275 - Release Date: 07/05/2003

3388. Re: Beginner wants to build VHF radio - book recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 13:39:46 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BAE27962.1A44A%stewart@say.net>
Source record: 35591
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

"ehsjr@bellatlantic.net" wrote:

> Another suggestion: go to hamfests and look for
> an old 2 meter mobile rig that needs repair.
> If it has the schematic and block diagram, buy
> it. You'll be able to learn a lot just repairing
> it. Perhaps even better - buy an old crystal
> controlled scanner at a hamfest. I've seen them
> go for $5.00. They cover portions of VHF and
> UHF, and at that price you could afford to "put
> bugs" on the receiver (i.e. purposely break it)
> and then learn what that does to the performance,
> how to diagnose the problem, and what the
> individual circuit does.

Excellent idea. I've learned a lot from repairing other devices, so this
should also help with this.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3389. FS: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 17:58:48 UTC
From: Mike Nowlen <mnowlen@comcast.net>
Message-ID: <qbfqbvca3s348ad4q7gbov0d6j3hr60abb@4ax.com>
Source record: 35592
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. 6 3/4 H" x 5"W x 4 1/4"D Weight: 20 Lbs. Great for 200-300
Watt Solid State Amp.

Picture at:
http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@comcast.net

3390. Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 18:12:54 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <vbqg9eeamnc6cb@corp.supernews.com>
Source record: 35593

I have nine 1300 ufd @ 450vdc/520 vdc surge filter capacitors for an amplifier
> power supply along with a 225 watt 50 ohm resistor for surge and a heavy
> duty relay rated at 25 amps at 240vac with a 24vdc coil. The caps were
> pulled from working equipment some time ago and a few of the caps have some
> slight dents in them from storage ,but they should be fine. These caps are
> 3" diameter and 4" tall. You can see a couple of pictures of them along with the
> other parts at this site: http://photos.yahoo.com/rob34115 and click on
> Robs`s photos. Make me an offer! Rob WB8VWI

3391. MRF-150 motorola mosfets in sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 21:55:24 UTC
From: oh8jep <apo@kotinet.com>
Message-ID: <b9jsde$n49$1@plaza.suomi.net>
Source record: 35594

Hello!

I put in eBay in sale if anyone interested

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3023820798&category=296&rd=1

In sale 4 pieces brand new original hard to find Motorola mosfets MRF-150.
Very good powerfull mosfets for linear amplifier projects.

Here one example: http://www.kotinet.com/oh8jep/eb104.html

Datasheet available for MRF-150:
http://www.kotinet.com/oh8jep/eb104/mrf150.pdf

Better photo can be found here:
http://www.kotinet.com/oh8jep/eb104/mrf150.jpg

73's de Aatos OH8JEP

3392. Want info to build P/S for ART 13

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 23:15:09 UTC
From: Sam <aa8wl@comcast.net>
Message-ID: <K9OcnT458qmpFSCjXTWcqQ@comcast.com>
Source record: 35595

Hi, I just picked up an ART 13 without the dynamotor. I am looking for info on building a power supply for this transmitter. If you have any info you would be willing to share I would appreciate it. TNX in advance. 73' de aa8wl Sam Email me directly at aa8wl@comcast.net

3393. 5 or 6 element 2 m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-10 23:54:47 UTC
From: Lushy <showbag@alphalink.com.au>
Message-ID: <3ebd909b@news.alphalink.com.au>
Source record: 35596

Could anybody put me onto a site that has a simple homebrew antenna for this freq. 144-148 megs
Ta Lushy VK3HDL
Vic Australia

3394. Re: 5 or 6 element 2 m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 01:30:02 UTC
From: Shane Deering <vk3bvp@qsl.net>
Message-ID: <luo0p-1ml.ln1@vk3bvp-3.ampr.org>
Source record: 35447

Lushy wrote:

> Could anybody put me onto a site that has a simple homebrew antenna for
> this freq. 144-148 megs
> Ta Lushy VK3HDL
> Vic Australia

You may find this handy -
http://www.qsl.net/vk3bez/DL6WU-3.zip
Extract the spreadsheet and have a play.
Any band. Any size. 50ohm feed. Proven design.
Whatever materials you have at hand.

--
Shane Deering Sent using Knode v0.7.1
vk3bvp@qsl.net on Mandrake Linux, the Desktop OS
vk3bvp@vk3bvp.#sev.vic.aus.oc MDK9.0 Up 3 hours and 12 minutes
http://www.qsl.net/vk3bvp/ RH7.2 Up 1 day, 19 hours and 42 minutes

3395. Re: 5 or 6 element 2 m antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 06:03:02 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <K0$4CkBWeev+EAr6@ifwtech.co.uk>
Source record: 35448

Shane Deering wrote:
>Lushy wrote:
>
>> Could anybody put me onto a site that has a simple homebrew antenna for
>> this freq. 144-148 megs
>> Ta Lushy VK3HDL
>> Vic Australia
>
>You may find this handy -
>http://www.qsl.net/vk3bez/DL6WU-3.zip
>Extract the spreadsheet and have a play.
>Any band. Any size. 50ohm feed. Proven design.
>Whatever materials you have at hand.
>
The DL6WU designs are excellent, but 10 elements is the minimum size.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3396. A great Forum related to building transmitters and other stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 06:20:45 UTC
From: "Alfred Zoer (A*L*I)" <alinter@alwaysaccess.nl>
Message-ID: <b9kq3rlv1@hermes.castel.nl>
Source record: 35449

A great Forum related to building transmitters and other stuff
Hello everyone.

Now a great forum related more or less building transmitters.

Guess could be very usefull. so take a visit and tell me about it. Should there be an other topic aswell??, would you like to be a moderator of a topic? Tell us and check it out.

http://www.alfalima.net/cgi-bin/teemz/teemz.cgi

Greetings and thanks

3397. Re: A great Forum related to building transmitters and other stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 12:03:18 UTC
From: w4pqwhs@aol.com
Message-ID: <20030511080318.13439.00000207@mb-m14.aol.com>
Source record: 35450

>
>A great Forum related to building transmitters and other stuff
>Hello everyone.

I notice that most of your action pertains to "Pirate broadcasting".. That is still Illegal in the USA and most other civilized countrys ...I don`t belive it is appropriate to promote that on Ham radio pages.. W4PQW

3398. Re: looking to build qrp transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 15:48:06 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EBE70B6.3090503@hotmail.com>
Source record: 35451

Soon is going a little far, I'm trying to plan the thing first and find
parts! Thanks for the advice and encouragement.

Bill Meara wrote:
> Alex <ve3leg@hotmail.com> wrote in message news:<3EBA9044.4080706@hotmail.com>...
>
>>Does anyone have any suggestions about a good(inexpensive) final that
>>will give me about 2-3 watts DSB on 20 meters?
>
>
> Alex: I'm very pleased to hear that there will soon be another
> station
> running QRP DSB on 20. I'm now running 1 W DSB HB solar powered on
> that band.
>
> I found that getting the final amp to run with stability was the
> hardest
> of the project. Here's an excerpt from an article I'm working on:
>
> "I thought that once I had an SSB signal at 18 Mhz, RF
> amplification would be the easiest part of the project.
> I was wrong. As occurred with my Double Sideband rig, I had real
> difficulty getting the RF amplifiers to
> function with stability. As I was struggling, I came across a
> comforting article by C.F. Rockey, W9SCH, in
> the British QRP magazine SPRAT. OM Rockey noted that, "It is the
> development of clean RF power in
> appreciable quantities that is the greatest challenge in this field
> for the average amateur." Amen to that,
> Rock! W9CSH went on to suggest ways to surmount the difficulties,
> but conceded that success is not
> guaranteed: He mentioned the possible need to sacrifice chickens to
> Papa Legba.
> I didn't have to kill any chickens, but a 20 meter CW transmitter
> was sacrificed. After several frustrating
> attempts to get RF amplifiers working, I resorted to the maneuver
> that I used in the Double Sideband
> project: I pulled a working broadband 5 watt amplifier out of a
> transmitter that I'd built several years ago
> and modified it for linear service."
>
> The circuit I ended up using can be seen in the 17 meter DSB portion
> of my web site: http://planeta.clix.pt/n2cqr
> It is a modification of the broadband amp used in the VXO 6 watter in

> QRP
> Classics.
>
> Good luck. 73 Bill CU2JL N2CQR

3399. Re: Want info to build P/S for ART 13

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 16:34:38 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EBE7B9E.7010003@bellsouth.net>
Source record: 35452

Sam wrote:
> Hi, I just picked up an ART 13 without the dynamotor. I am looking for
> info on building a power supply for this transmitter. If you have any info
> you would be willing to share I would appreciate it. TNX in advance. 73'
> de aa8wl Sam Email me directly at aa8wl@comcast.net
>
>
>

There is circuit for one in the 'surplus conversion manuals' published
by CQ
magazine. I would scan it and post it if I could find my copy. After I
finally
get my old magazines unboxed (still in storage after we moved) I could
do it.
Maybe someone else has this book.

3400. Re: A great Forum related to building transmitters and other stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 17:32:26 UTC
From: "Alfred Zoer (A*L*I)" <alinter@alwaysaccess.nl>
Message-ID: <b9m1farl1@hermes.castel.nl>
Source record: 35453

I must admit that you are right about it for 80%
but as there are also so many like to get information from such a forum i
thought it would be okay. You would not believe how many friends we have
here in holland who are in the Ham stuff.
And also in the future i may become legal. I am learning.
Greetz and all the best. Alfred
> >
> >A great Forum related to building transmitters and other stuff
> >Hello everyone.
>
> I notice that most of your action pertains to "Pirate broadcasting".. That
is
> still Illegal in the USA and most other civilized countrys ...I don`t
belive it
> is appropriate to promote that on Ham radio pages.. W4PQW

3401. Re: A great Forum related to building transmitters and other stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 19:18:35 UTC
From: Buzz <!buzz@flatheadracing.com>
Message-ID: <l08tbv0tu3avmtkbte71nlfjn1sbfbfk9e@4ax.com>
Source record: 35454

On Sun, 11 May 2003 08:20:45 +0200, "Alfred Zoer \(A*L*I\)"
<alinter@alwaysaccess.nl> wrote:

>A great Forum related to building transmitters and other stuff
>Hello everyone.
>
>Now a great forum related more or less building transmitters.
>
>Guess could be very usefull. so take a visit and tell me about it. Should
>there be an other topic aswell??, would you like to be a moderator of a
>topic? Tell us and check it out.
>
>http://www.alfalima.net/cgi-bin/teemz/teemz.cgi
>
>Greetings and thanks
>
>
I noticed you want all people to register, I get over 100 SPAMS in a
24 hour period started from people who want you to register and
promise not to divulge your E-mail address. How about an open forum.

Gary KF9CM
Remove ! from E-Mail to contact. !buzz@flatheadracing.com

3402. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 20:12:18 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3EBEAEA2.5B4696B4@visi.com>
Source record: 35455

Bob Liesenfeld wrote:
>
> Howdy folks,
> In the past I have used permanent magic marker to draw tracks on a
> board, but have never been satisfied with the durability of this ink
> under enchant.
>

Thanks for all the replies. I could not find the Lumocolor pens
locally, but did try a Sharpie "Industrial" permanent marker with good
results.

72
Bob

3403. WTB s-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 20:24:06 UTC
From: John Bartley <jcb@igs.net>
Message-ID: <3ebeb25b$1_6@corp.newsgroups.com>
Source record: 35456

I am looking for an S-meter for an HQ145 receiver. If possible when answering please estimate postage to the address below.

many thanks
--
==

Regards from :

John Bartley

43 Norway Spruce Street

Stittsville, Ontario

Canada, K2S1P5

1-613-831-1396

==

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3404. Re: Want info to build P/S for ART 13

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 22:28:53 UTC
From: averyfineman@aol.com
Message-ID: <20030511182853.18770.00000544@mb-m19.aol.com>
Source record: 35457

In article <K9OcnT458qmpFSCjXTWcqQ@comcast.com>, "Sam" <aa8wl@comcast.net>
writes:

>Hi, I just picked up an ART 13 without the dynamotor. I am looking for
>info on building a power supply for this transmitter. If you have any info
>you would be willing to share I would appreciate it. TNX in advance. 73'
>de aa8wl Sam Email me directly at aa8wl@comcast.net

There's a place for free military technical manual downloads:

www.kg7bz.com (run by August Johnson, KG7BZ)

There are two Technical Order documents for the ART-13 available
there:

TO 12R2-2ART-13-1 (21 MB file size)

TO 12R2-2ART-13-2 (42 MB file size)

Lots of other TMs available there for ancient glow-in-the-dark
military radio equipment in PDF. The few I've downloaded are
EXCELLENT in quality. August deserves some recognition
for that fine service.

Len Anderson
retired (from regular hours) electronic engineer person

3405. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-11 22:35:36 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b9mj7o$h65$1@freenet9.carleton.ca>
Source record: 35458

Bob Liesenfeld (wb0poq@visi.com) writes:
> Bob Liesenfeld wrote:
>>
>> Howdy folks,
>> In the past I have used permanent magic marker to draw tracks on a
>> board, but have never been satisfied with the durability of this ink
>> under enchant.
>>
>
> Thanks for all the replies. I could not find the Lumocolor pens
> locally, but did try a Sharpie "Industrial" permanent marker with good
> results.
>
> 72
> Bob

There was a detailed article about using pens for resist, in Ham Radio magazine. I'd place it in 1986, but it might be a bit later. He rated various pens, including a Lumocolor that some have mentioned.

Unless I'm mixing it with another article, he mentioned opening the pen up and adding some rubbing alcohol, to make the ink draw smoothly on the circuit board. I remember trying this, and it did seem to help.

Obviously, cleaning the board is important. I use to use steel wool. In more recent years, I took one of those sanding attachments for a drill (a piece of rubber, and a piece that goes in the chuck where you also attach the sandpaper with a screw) and used pieces of that plastic "steel wool" cut to the size and shape of the rubber piece. No bits of steel wool around afterwards, and it made it terribly easy to get a shiny surface on the board, before and after the etching.

Michael VE2BVW

3406. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 03:22:10 UTC
From: averyfineman@aol.com
Message-ID: <20030511232210.18775.00000742@mb-m02.aol.com>
Source record: 35459

In article <b9mj7o$h65$1@freenet9.carleton.ca>, et472@FreeNet.Carleton.CA
(Michael Black) writes:

>> Thanks for all the replies. I could not find the Lumocolor pens
>> locally, but did try a Sharpie "Industrial" permanent marker with good
>> results.
>>
>> 72
>> Bob
>
>There was a detailed article about using pens for resist, in Ham Radio
>magazine. I'd place it in 1986, but it might be a bit later. He
>rated various pens, including a Lumocolor that some have mentioned.
>
>Unless I'm mixing it with another article, he mentioned opening the pen
>up and adding some rubbing alcohol, to make the ink draw smoothly on
>the circuit board. I remember trying this, and it did seem to help.
>
>Obviously, cleaning the board is important. I use to use steel wool.
>In more recent years, I took one of those sanding attachments for a drill
>(a piece of rubber, and a piece that goes in the chuck where you also attach
>the sandpaper with a screw) and used pieces of that plastic "steel wool"
>cut to the size and shape of the rubber piece. No bits of steel wool
>around afterwards, and it made it terribly easy to get a shiny surface
>on the board, before and after the etching.
>
> Michael VE2BVW

For cleaning and polishing the foil surface, the ordinary B&D
"Scrub Buster" works well, is cordless and waterproof, comes
with at least two standard plastic "steel wool" pads that un-
mount easily for cleaning or changing. Most any kitchen sink
cleaner works fine with that. No "mods" required.

A "Scrub Buster" can also do finishing of bare aluminum to a
nice gloss. It operates at a relatively slow revolution rate so is
less likely to jump (accidentally) to a high speed and toss a
piece of work off a bench.

Both the "Scrub Buster" and "Dust Buster" operate from a
non-standard-size rechargeable battery (charger is standard
with either). That might be an area to investigate as a high-
energy content supply for radio uses...don't know if anyone
has tried that yet.

Getting a household appliance away from a spouse is quite
another matter and a different ingenuity is required for that. :-)

Len Anderson
retired (from regular hours) electronic engineer person

3407. Comparing surplus receivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 06:57:11 UTC
From: la8ak.xnd@online.no
Message-ID: <3ebebe51.73476929@news.online.no>
Source record: 35460

Have tried to make simple circuits to compare functions of different
surplus receivers, so far most are German, see
http://home.online.no/~la8ak/17a.htm

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3408. FS Items

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 10:38:55 UTC
From: Lou <Tech@DP.NET>
Message-ID: <b9ntl4$m91$1@news.dp.net>
Source record: 35461

Have some stuff good for homebrew, etc. E-Mail for list.

--
Lou/Tech@DP.NET

3409. Re: Field Strength Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 12:45:56 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <b9o527$lamuk$1@ID-134747.news.dfncis.de>
Source record: 35462

Try this

http://www.njqrp.org/sniffer/index.html

73 es cul

wb3fup
a Salty Bear

"James Spriggs" <See.Message.Text@forReply.net>
wrote in message
news:3ebf8d2c$0$10377$afc38c87@news.optusnet.com.au...
> Hi,
>
> Does anyone have any links or references to good
> construction articles for accurate Field
Strength Meter ?
>
> The application is field testing & comparison of
HF antennas.
>
> TIA
>
> Jim
>
>

3410. PSU needed can you help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 14:26:00 UTC
From: cgraber@fwi.com
Message-ID: <4b3d627.0305120626.7c770e1f@posting.google.com>
Source record: 35463

Greetings Again everyone

sorry to post this unrelated laser question just thought maybe one of you electron focused brainiac's (-; might be able to shed some light on this for me!

problem:

Working on a rather cool full wave electro-acoustic resonator and need to drive a rather large piezo stack with 600-800v at 5.6khz-23.7khz adjustable sine wave output...

current will be somwhere between 125ma-250ma depending on the quantity of wafers I end up with in the stack and it needs to be quite linear in output.

Any Idea's poping into your head at the moment?

No audio application amps will swing bigger than 110-125v in bridge mode typically and I can't for the life of me think of a transformer type that will be anywhere close to the step (8 or 9 to 1) I need and yet capable of efficient inductance at that freq.

most audio related big transformers work very poor above 15khz and really are quite useless at 18khz+

Do any of you know of a cascaded output section amplifier topology capable of swinging this kind of amplitude at freq?

Many thanks for anyone with ventured knowledge or just thoughts...

Curt

3411. Re: PSU needed can you help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 17:34:08 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <b9omdg$sc@library2.airnews.net>
Source record: 35464

"Sonicguru" <cgraber@fwi.com> wrote in message
news:4b3d627.0305120626.7c770e1f@posting.google.com...
> Greetings Again everyone
>
> sorry to post this unrelated laser question just thought maybe one of
> you electron focused brainiac's (-; might be able to shed some light
> on this for me!
>
> problem:
>
> Working on a rather cool full wave electro-acoustic resonator and need
> to drive a rather large piezo stack with 600-800v at 5.6khz-23.7khz
> adjustable sine wave output...
>
> current will be somwhere between 125ma-250ma depending on the quantity
> of wafers I end up with in the stack and it needs to be quite linear
> in output.

800 V, 250 mA is 200 W into about a 3.2 K load.

> Any Idea's poping into your head at the moment?

Horizontal output transistors. Here's one:

http://www.nteinc.com/specs/100to199/pdf/nte165.pdf

Vce(max) is 1500 V, Ic(cont)(max) is 8 A, Pd(max) is 150 W. I suspect that
if you built up a bridge of them, with suitable phase inverters to drive
things correctly, and suitable feedback control to keep things nicely
linear, you could have some serious fun.

3412. Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 20:18:41 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0305121218.61d0e5a9@posting.google.com>
Source record: 35465
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Thanks to everyone who gave me great advice on the improved SWR/wattmeter I have been working on this semester for an independent study project in my graduate work. I put my device together, and it works. Though it doesn't quite have the performance I hoped for, it still runs rings around the MFJ cross-needle meters (high SWR and QRP capability as well as 100W capability). In case you are wondering, I am using FT82-43 toroids for the transformers with #30 wire for the primary (high voltage, low current) windings. I really pushed the limits on many things, such as the capability of LM324s, the capability of LM3914s, the current capacity of wire (>1A and #30 wire on an FT50-43 core do not mix), the space needed for the wires connecting 20-40 LEDs, and what happens when you accidentally connect a capacitor the wrong way (leaking fluid, noise, mess on the breadboard).

I am working on my report, and one thing that still puzzles me is the significance of the inductive reactance in transformers. The design I am using is based on the one at http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html

I have heard that the inductive reactance across a transformer winding should be at least 4 times the resistance that is connected across it. There is 100 ohms of resistance across the voltage transformer, so that should mean j400 ohms of resistance are required in the winding. According to the software programs of Reg Edwards (and the ARRL formulas), the secondary winding (the 1-turn side) of the voltage transformer would have only .45uH with one of the FT82-43 cores I am using. Most other SWR meter designs actually use SMALLER cores (FT50, even FT37), which have even less inductance per turn. The .45uH is only j5 ohms on 160m and j84 ohms on 10m, a far cry from j400 ohms.

Could someone please shed some light on what is going on? How much inductive reactance is REALLY needed, and what would have happened if I did not have enough? Why can't RF transformers use plastic or air cores? (They would be much cheaper.)

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

3413. Re: PSU needed can you help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 21:01:04 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <onsvbvgl5iofbo6filfnpqbl8f3g2nbg80@4ax.com>
Source record: 35466

On 12 May 2003 07:26:00 -0700, cgraber@fwi.com (Sonicguru) wrote:

>most audio related big transformers work very poor above 15khz and
>really are quite useless at 18khz+

Have you looked at TV line output transformer cores or switching mode power supply transformer cores. Those ferrites should operate reasonably in your frequency range.

You could even try using some existing SMPS transformers intended for 230 V mains SMPS and run them in the opposite direction. Take two such transformers (in the 50-100 W range) and connect the low voltage sides in series and you should have at least 400 V. With 3 or 4 transformers with the high voltage sides in series, you should be in the 600-800 V range. Unfortunately I have no idea about the linearity of the ferrites used in these SMPS transformers, so you may have to apply some feedback.

Paul

3414. Heath Hr 10B..thinking of selling for parts or as is for fixing or whatever.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-12 23:36:50 UTC
From: ve3ab@mail.mondenet.com
Message-ID: <3ec02e99.7665896@news.mondenet.com>
Source record: 35468

I just bought a real good condition HR10B receiver (this is the one im keeping)..the other one..i was going to fix up..is now surplus to my needs. Problem..some surface rust on the bottom cover..with a wee bit on the bottom front panel. It isnt functioning electrically either..although looks pretty good inside. I have the manual.
Id let it go quite cheap..say $25.00 US plus postage..if someone can use the parts..ie for homebrewing or as spares. I wouldnt mind keeping the tubes as spares for my good Hr 10b.
I might also trade for useful parts..ie torroids or other common homebrew stuff. 73 Earl VE3AB

3415. List of Tubes FS at Dayton HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 01:29:56 UTC
From: Dave Woolf <dwoolf@worldnet.att.net>
Message-ID: <3EC04AA5.2020904@worldnet.att.net>
Source record: 35469
Cross-posted to:
rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.ham-radio.swap,rec.antiques.radio+phono

Our Radio Club is attempting to clear out an inventory of NOS tubes.
These will be available at Dayton Hamvention. We will be in the
Flea Market spaces 734 and 735. We intend to be there all day Fri.
and Sat. The list of our inventory is attached.

Dave Woolf - K8RSP
for:
CRES ARC - W8ZPF
(146.67/07 Repeater Columbus, OH)

TUBE Quantity

2022 1
2050A 2
5642 4
5651A 4
5840 2
5841 1
5879 1
5963 1
6072 2
6211 5
6211A 9
6080 3
7233 1
7534/E130L 2
7586 10
7591A 1
7788 2
8393 4
8416 2
8608 4

0A3 2
0G3 3
1L4 2
1AY2 1
1G3GT/1B3GT 1
1K3/1J3 1
1N5GT 1
2D21W 3
3DB3/3CY3 2
5U4GB 8
5V4GA 6

5Y3GT 2

6AG7 5
6AH6 3
6AK5 9
6AM6 6
6AM8A 2
6AN4 1
6AN8A 5
6AQ5A 1
6AS5 4
6AS6 13
6AS7G 2
6AU4GTA 1
6AU5GT 5
6AU6A 9
6136/6AU6WA 7
6AV5GA 2
6AX5GT 3
6BA8A 5
6BF11 1
6BH6 4
6BH8 4
6BJ7 4
6BL7GTA 3
6BM8 2
6BN6 2
6BQ7A 2
6BS8 1
6BW4 4
6BY6 3
6BY8 7
6C5 2
6CB6A/6CF6 11
6CM4 2
6CM5/EL86 2
6CW4 3
7895/6CW4 1
6CW5 26
6CX8 10
6CZ5 3
6DJ8 6
6DK6 5
6DQ5 1
6DQ6B/6GW6 2
6DW4B 1
6EV5 1
6EW6 2
6GE8/7734 25
6GF5 7

6GF7A 1
6GJ7 1
6GM8 5
6GT5A 2
6GV8 3
6H6 3
6J5 1
6J7 4
6JZ8 1
6K6GT 10
6MD8 1
6N7 6
6S4A 5
6SF5 1
6SH7 3
6SL7GT 6
6SN7GTB 3
6SU7GTY 2
6T8A 24
6W4GT 1
6W6GT 2
6202/6X4WA 10
6X5GT 2
6X8A 1

12AL5 5
12AQ5 24
12AU7A 13
12AT6 1
12AV7 1
12B4A 2
12BH7A 6
12BL6 1
12H6 5
12SL7GT 3
12SN7GTA 7
25L6GT 4
38HK7 1
50B5 2

3416. VE3AB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 03:01:38 UTC
From: Lou <Tech@DP.NET>
Message-ID: <b9pn8cvmi1@news.dp.net>
Source record: 35470

Your e-mail address bounced on me twice now. Send me address to ship list
to.

--
Lou/Tech@DP.NET

3417. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 03:07:49 UTC
From: averyfineman@aol.com
Message-ID: <20030512230749.18755.00000707@mb-m06.aol.com>
Source record: 35471

In article <b9mj7o$h65$1@freenet9.carleton.ca>, et472@FreeNet.Carleton.CA
(Michael Black) writes:

>> Thanks for all the replies. I could not find the Lumocolor pens
>> locally, but did try a Sharpie "Industrial" permanent marker with good
>> results.
>>
>> 72
>> Bob
>
>There was a detailed article about using pens for resist, in Ham Radio
>magazine. I'd place it in 1986, but it might be a bit later. He
>rated various pens, including a Lumocolor that some have mentioned.
>
>Unless I'm mixing it with another article, he mentioned opening the pen
>up and adding some rubbing alcohol, to make the ink draw smoothly on
>the circuit board. I remember trying this, and it did seem to help.
>
>Obviously, cleaning the board is important. I use to use steel wool.
>In more recent years, I took one of those sanding attachments for a drill
>(a piece of rubber, and a piece that goes in the chuck where you also attach
>the sandpaper with a screw) and used pieces of that plastic "steel wool"
>cut to the size and shape of the rubber piece. No bits of steel wool
>around afterwards, and it made it terribly easy to get a shiny surface
>on the board, before and after the etching.
>
> Michael VE2BVW

For cleaning and polishing the foil surface, the ordinary B&D
"Scrub Buster" works well, is cordless and waterproof, comes
with at least two standard plastic "steel wool" pads that un-
mount easily for cleaning or changing. Most any kitchen sink
cleaner works fine with that. No "mods" required.

A "Scrub Buster" can also do finishing of bare aluminum to a
nice gloss. It operates at a relatively slow revolution rate so is
less likely to jump (accidentally) to a high speed and toss a
piece of work off a bench.

Both the "Scrub Buster" and "Dust Buster" operate from a
non-standard-size rechargeable battery (charger is standard
with either). That might be an area to investigate as a high-
energy content supply for radio uses...don't know if anyone
has tried that yet.

Getting a household appliance away from a spouse is quite
another matter and a different ingenuity is required for that. :-)

Len Anderson
retired (from regular hours) electronic engineer person

3418. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 04:41:31 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <abp0cv0ek4si9nu8hpjuqk6177uua6cdts@4ax.com>
Source record: 35467

On 12 May 2003 03:22:10 GMT, averyfineman@aol.com (Avery Fineman)
wrote:

> For cleaning and polishing the foil surface, the ordinary B&D
> "Scrub Buster" works well, is cordless and waterproof, comes
> with at least two standard plastic "steel wool" pads that un-
> mount easily for cleaning or changing. Most any kitchen sink
> cleaner works fine with that. No "mods" required.

I find acetone to be the best stuff to use, both for cleaning the
scrubbed board prior to marking out, and to remove the marker pen
afterwards. It really gets all the crap off like nothing else.

3419. Circuit diagram for Marconi 6960 power meters inputs?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 09:52:35 UTC
From: harri.sillanpaa@lsk.fi
Message-ID: <a648a9be.0305130152.36efec4e@posting.google.com>
Source record: 35472

Hello.

I need to circuit diagrams for Marconi 6960 power meters input connectors?

Can somebody send to me more information for powermeter. I have marconi
6422 power head and marconi 6960 powermeter, which i want to connect together.

Thank's.

Harri OH3PC

email: harri.sillanpaa@lsk.fi

3420. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 12:32:21 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <hsc1cv43tcv2cdptqj1v3vsaqv1ceikti2@4ax.com>
Source record: 35473

In <874r46n0mo.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>I understand that you probably don't have much to do up there until the snow
>
>You probably don't understand anything at all about what there
>is to do here, or not. But like everything in this thread, your
>imagination is used as a substitute when in doubt.

We can either argue with logic or take cheap shots at each other, but we can't
do both. It's your choice.

>>melts, but don't count on me to keep you occupied by arguing this subject.
>>Regardless, I'll try and make my point as clear as possible. If you can't
>>understand it, that's your problem.
>
>You've missed on all counts to date, what likelihood is there
>that any of this going to get through to you?

Sock it to me....

>>In <8765onns2c.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>>>In <Xns937366EA46B9Apookster@129.250.170.85>, Bill Turner <noway@nohow.com> >wrote:
>>>>>The original poster wanted to obtain equipment to jam that frequency.
>>>>
>>>>I thought that much was obvious, but it seems Floyd missed the original post.
>>>>For that reason I think I'll avoid the impending flame war.
>>>
>>>What the OP wanted, and what we've been discussing, are two
>>>distinctly separate things.
>>
>>The OP asked for help to build a device that will jam radio transmissions on a
>>specific frequency. That much should be obvious by now. However, the discussion
>>became about what to do if you find that you are bugged with wireless devices.
>
>Hence, as I said, what the OP wanted is not what we are
>discussing, and is not germane.

The source of the discussion was WIRELESS devices, which was -VERY- relevant.
You can't obfuscate that fact, so don't even try.

>>First, there is the question of legality. From the CFR Title 47:
>
>What, exactly, are the criminal penalties for violation of a CFR?

Don't you understand the concept of the punishment being commensurate with the crime?

>Aren't we just a little more interested in the Communications Act of
>1934 as ammended, and a few others from the US Code?

Is there something that you don't understand about law and punishment?

>Here is where you can find what makes the description given by
>the OP a potentially criminal case. (Note that it has virtually
>nothing to do with the FCC or licensed operation of radio
>equipment.)

Say WHAT? Are you saying that eavesdropping using radio equipment has nothing to do with radio equipment? And that the FCC has nothing to do with radio equipment? PLEASE don't tell me that you don't see the connection!!!!

> Note that this one law makes both a wiretap illegal
>*and* makes equally illegal the use of a radio device (licensed
>or otherwise) to intercept "oral" communications.

As I quoted, Parts 2 and 15 of CFR Title 47 cover licensed and unlicensed radio equipment, respectively. The two regulations cover both bases. Your quote merely defines exclusions that do not extend beyond the exclusions in the regulations I quoted. Regardless:

> "ï¿½ 2511.

Subsection of what? Which title? Which section? If you are going to quote the law, at least learn to quote properly. Oddly enough, the law you cite below (but fail to quote in completeness) supports my argument.

>Perhaps you should revue then entire law in detail.
>
> http://www4.law.cornell.edu/uscode/18/2510.html

Perhaps you should "revue then entire law in detail" yourself, Floyd. The law you cite defines the exclusions established in Parts 2 and 15 of Title 47, as previously quoted:

>>Sec. 2.701 Prohibition against use of a radio device for eavesdropping.
>> (a) No person shall use, either directly or indirectly, a device
>>required to be licensed by section 301 of the Communications Act of
>>1934, as amended, for the purpose of overhearing or recording the
>>private conversations of others unless such use is authorized by all of
>>the parties engaging in the conversation.
>> (b) Paragraph (a) of this section shall not apply to operations of
>>any law enforcement officers conducted under lawful authority.
>>
>>Sec. 15.9 Prohibition against eavesdropping.
>> Except for the operations of law enforcement officers conducted
>>under lawful authority, no person shall use, either directly or
>>indirectly, a device operated pursuant to the provisions of this part
>>for the purpose of overhearing or recording the private conversations of
>>others unless such use is authorized by all of the parties engaging in

>>the conversation.
>
>So if you and I violate the above, the FCC can yank our tickets!
>Whoop dee doo!

Only Part 97 of Title 47 is about amateur radio licenses, or "tickets". You should really study this material before you publically make an ass or yourself on the newsgroup. (BTW, you do know that all these posts are archived for posterity, don't you? Maybe you want to think about your next post before you spout off more ignorance and make fools of your progeny.)

>>Now, assuming someone finds a radio device being used for eavesdropping. The FCC
>>is the first agency to contact because it is their responsibility to determine
>>if the above regulations are not being violated. Notice that there are two parts
>
>The FCC has _regulatory_ jurisdiction. The FBI however has
>jurisdiction when a _criminal_ violation of Federal law has
>occurred. If you want assistance with ensuring compliance with
>the regulations, calling the FCC to have an unlicensed operator
>censured and forced to comply with Federal regulations is very
>much in order.

You are starting to sound like those paranoid whackos who think that 'regulations' are not 'laws'. In case you missed the first page, "CFR" stands for "Code of Federal Regulations" which is LAW (as proclaimed by Congress, established by presidential acceptance, and supported by judicial authority), the violation of which is a CRIME. Is there something you don't understand here? The FCC is as much a law enforcement agency as it is a "regulatory" agency -- it enforces federal 'regulations' -- duh! (Maybe the problem is that there was never a TV sitcom based on the FCC...?)

>But if you want the same party charged with criminal use of that
>equipment, call the FBI.

Do you actually think that the FBI is the only federal law enforcement agency? Get a clue: www.rainreport.com

>In fact, both may be involved, but the most significant
>difference is that the FCC has relatively very few field
>personal and they are engineers not law enforcement, while the
>FBI has many and they have authority conduct criminal
>investigations.

In -FACT-, the FCC has MANY people charged with enforcing FCC regulations. Check out www.fcc.gov

>Perhaps *you* happen to live close to the only seriously active
>FCC office in the country, but 200,000,000+ Americans don't.
>They should contact the local FBI or other law enforcement
>agencies if they want any chance at all for some kind of action.

In -ANY- state, even Alaska, the FCC will get involved -VERY- quickly if you can show that there has been a serious violation. Jamming an active PSP freq is a

serious violation. Period. Do you disagree? If you do, I invite you to jam your local PSP freqs and see just how long it takes for the FCC to shut you down (i.e, lock you up). I suspect that it won't take them much longer than a week, probably less. Care to make a wager?

>>to these regulations: First, the device must be an authorized radio device,
>>which is clearly the sole jurisdiction of the FCC. Second, they may only be used
>
>It is the sole jurisdiction of the FCC to administrate the
>authorization of said radio device. It is not the sole
>jurisdiction of the FCC to deal with criminal operation of said
>device.

You still can't seperate the two concepts: criminal OPERATION OF such devices, and criminal ACTIVITY USING such devices. Regardless, the FCC is the agency that has jurisdiction in BOTH instances, as previously noted.

>Which do you want, a criminal investigation or a letter to the
>perpetrator demanding that the device be properly licensed and
>operated?

If you can cite even ONE case where electronic surveillance has resulted in nothing more than an NAL, I will concede such a lame excuse. You can't, therefore I won't.

>>by "law enforcement officers conducted under lawful authority". That phrase, or
>>anything like it, doesn't appear in any other federal regulation, and therefore
>>the sole jurisdiction AGAIN rests with the FCC. So even if the devices ARE
>
>Your logic is a bit confused. How does that phrase give "sole"
>jurisdiction to the FCC???

Because the responsibility is not given to any other agency. The logic is by inclusive authority -- pretty basic stuff. Did you even study logic? If you didn't, don't even go there. If you did, should I draw you a Venn diagram?

> In fact, it does not. In fact even
>you said that what the FCC would do is call in a police agency.
>They will in fact call in the agency that does have jurisdiction.

They must verify the legal use of such devices by contacting any law enforcement agency that may have authorization to use such devices. Did I stutter?

>And it has *nothing* to do with whether the device is license or
>not.

OTC, it does. LE agencies are not allowed to use unauthorized devices.

>>legal, it is up to the FCC to see that they are being used "under lawful
>>authority". That means they must contact any and all law enforcement agencies
>>within that jurisdiction and determine if the devices are being used legally.
>>
>>So in your own words, "'Nuf said."
>

>Any police agency has exactly the same requirement. And of
>course police agencies might even have people available to
>investigate. How many criminal investigators does the FCC
>employ full time?

More than you might think (but not enough, IMO).

>>But apparently not, because then you interjected with wiretapping, which is not
>>the same as wireless bugs simply because a wiretap doesn't necessarily involve
>>radio. The FCC doesn't have jurisdiction over wiretapping UNLESS it involves
>>wireless communication. If the wiretaps do not use radio devices then the
>>jurisdiction falls onto the state, not the FBI. Now the FBI becomes involved
>>when the wiretapping (and wireless eavesdropping, for that matter) are used in
>>the commission of an interstate (federal) crime....
>
>And just as obviously when the wiretap does involve radio
>devices... the FCC is just as involved (and equally
>unavailable).

They don't have the time or resources to hunt down every little snap, crackle and pop in someone's cellphone, which is what would happen if they investigated every paranoid rant. Show them some -real- evidence and they will be all over it like white on rice -- I shit you not.

>Regardless, you did notice that CFR 47 is titled
>"Telecommunications", not "Wireless Telecommunications", right?
>They have exactly the same jurisdiction over non-wireless
>telephone systems as they do over wireless telephone systems.

If you are going to quote the law, first show at least a superficial attempt to understand it. And here's a good start: where in Title 47 does it say anything about eavesdropping on wired communications? When you find that part then maybe then you can try and prove your assumption that the FCC has "exactly the same jurisdiction over non-wireless telephone systems as they do over wireless telephone systems". Otherwise, you should make a sincere attempt to understand what the word "federal" means, and why your assumption is wrong.

>>IOW, you have to know what crime is being violated before you can determine
>>jurisdiction, and therefore contact the appropriate agency. Evidently, you don't
>>know the difference.
>
>The FBI is going to have jurisdiction if there is a violation of
>Federal law.

Oh, come on now. If you think that the FBI is the only federal law enforcement agency then you have been watching too much TV. Don't plead ignorance here: If you break a tax law, do you think that the IRS is going to take a backseat to the FBI? Do you really think the readers of this newsgroup are THAT stupid?

>>>I addressed email to the OP regarding his post, with very little
>>>advice and a couple of rather pertinent questions and the
>>>comment that nothing further would be coming without
>>>verification of the answers.

>>>
>>>He did not respond, and I take that to mean that my original
>>>suspicions (and yours too) were correct.
>>>
>>>However, you and the OP are not a dichotomy. You can both be
>>>wrong.
>>
>>So can you, Floyd. Don't forget that.
>
>You were claiming that the OP being wrong makes you right.

I said nothing of the sort, Floyd. Don't attribute statements to me that I did not make. OTC, read your own words in context: "You can both be wrong", implying that not only was -my- opinion wrong, but so was that of the OP, even though he NEVER EXPRESSED any opinion AT ALL -- he just asked a question. Me think thou doth protest too much....!

> I've
>not made any such claim.

Your implication was that we were both wrong, again totally ignoring the fact that the OP was only asking a question.

So are you so bored that you want to argue this even further?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3421. E.F. Johnson Roller Coaster: Specs Required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 12:49:38 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b9qph5$lvl3h$1@ID-150848.news.dfncis.de>
Source record: 35474

>http://www.colomor.demon.co.uk/images/Roller%20coaster%20EF%20Johnson.j
pg<

Does anyone have the specs for the above roller coaster?

Part number seems to be: 24.298-2

TIA. Rich.

3422. Re: Valve plate RF Choke.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 13:49:38 UTC
From: ^2@vc.net
Message-ID: <^2-1305030649380001@192.168.1.200>
Source record: 35475

In article <3200347.0305092344.4cd739b3@posting.google.com>, k7itm@aol.com (Tom Bruhns) wrote:

> "Eniac" <eniac@eniac.homelinux.com> wrote in message news:<b9g3h2$1vlq$1@ulysses.noc.ntua.gr>...
> > Thank you Tom.
> >
> > I don't have the old one but i remember that it was "pi" sections.
> > For this type of wind, is it enough to divide the total turns to segments ?
> >
> > Example :
> > total turns = 600
> > Segments = 3
> > turns by segment = 200 ?
> >
> > Is this OK ?
> >
> > Thank you.
>
> The exact value of the choke should be non-critical.

** choke resonances are the critical thing for those who wish to avoid choke fires,

>The formula I
> gave is for single-layer solenoid coils, but it will give a reasonable
> estimate even for multiple layers like you'll have in the sections. I
> would say the number of turns you suggest is reasonable, if your
> former is about 12mm diameter and the overall span of the segments is
> around 25mm. Try winding up one and see what inductance you get. It
> may take a little practice to get the pi winding right. If you don't
> have a ready way to make an inductance measurement, try resonating the
> choke with a capacitor and find the resonant frequency, and calculate
> the inductance from that. It may take a couple trials to get it
> right, but that's part of what homebrewing is about. Good luck with
> your project.
>
** constructing HV-RF chokes is discussed on my Web site.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3423. Re: E.F. Johnson Roller Coaster: Specs Required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 13:57:48 UTC
From: ^2@vc.net
Message-ID: <^2-1305030657480001@192.168.1.200>
Source record: 35476

In article <b9qph5$lvl3h$1@ID-150848.news.dfncis.de>, "Richard"
<nearlynews_email@ntlworld.com> wrote:

> >http://www.colomor.demon.co.uk/images/Roller%20coaster%20EF%20Johnson.j
> pg<
>
> Does anyone have the specs for the above roller coaster?
>
> Part number seems to be: 24.298-2
>
> TIA. Rich.

** that looks like an ancient one. If it is wound with #12 wire, 5A CCS
@ 30MHz, and #10 wire is good for c, 7A.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3424. re-chargeable lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:02:06 UTC
From: Daniel <daniel@chan.net>
Message-ID: <b9r1db$hfj1@imsp212.netvigator.com>
Source record: 35477

Dear OM,

I'm now looking for some (3.6v or above) re-chargeable lithium battery to extend the tx time for my Yaesu FT-51R. If you have any information for ordering and shipping to Hongkong, pls send me an email.

73 de vr2udp - Daniel

3425. Need info on NEC Channel Tester 100539

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:27:13 UTC
From: Jesper <jmandre@NOSPAMbigfoot.com>
Message-ID: <3EC10ECD.80706@NOSPAMbigfoot.com>
Source record: 35478

I found this device in a junk shop. It is attached to a NEC PC-8201A "laptop" PC. The tester has a number of BNCs marked Rx, Tx, RSSI, etc. Could anyone tell what this thingy is for, and if a manual and any software needed can still be found?

Best regds,

Jay

3426. re-chargeable Lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:36:55 UTC
From: Daniel <daniel@chan.net>
Message-ID: <b9r3em$her1@imsp212.netvigator.com>
Source record: 35481

Dear OM,

I'm now looking for some (3.6v or above) re-chargeable lithium battery to extend the tx time for my Yaesu FT-51R. If you have any information for ordering and shipping to Hongkong, pls send me an email.

73 de vr2udp - Daniel
daniel@chan.net

3427. Re: re-chargeable lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:38:56 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <b9r3ig$o9q$0@208.206.142.79>
Source record: 35479

I use NiMH rechargable cells, they're almost as current dense and longlived
as
the Lithium ion type.

Dick

Daniel wrote:

> Dear OM,
>
> I'm now looking for some (3.6v or above) re-chargeable lithium battery to
> extend the tx time for my Yaesu FT-51R. If you have any information for
> ordering and shipping to Hongkong, pls send me an email.
>
> 73 de vr2udp - Daniel

3428. FS: SIGNAL CORPS WESTON 774-5 ANALYZER, Checks Tubes +++

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:41:44 UTC
From: rlucch2098@aol.com
Message-ID: <20030513114144.08674.00000212@mb-m22.aol.com>
Source record: 35480

Hi All;
I have for sale a 1943 Weston 774-5 US Army Signal Corps ANALYZER. It checks just about everything, tubes, ohms, HV, Caps, etc!
It has some sort of Tube adapters which plug into the top so you can check each pin status with the built-in metering? I've never seen this before.
I have replaced the line cord & it seems to check the older style tubes just fine. It uses two dry cell batteries inside for the VOM, Both are original Burgess :-), one is a "D" cell, the other is a 4.5V which you can easily replace with 3 type "D" cells. Plenty of room in the case for this!
May need some cleaning, adjustments, etc!
Price is $75 + UPS.
Pics>>
http://www.myradioroom.com/weston1.jpg
http://www.myradioroom.com/weston2.jpg
http://www.myradioroom.com/weston3.jpg
http://www.myradioroom.com/weston4.jpg
http://www.myradioroom.com/weston5.jpg
http://www.myradioroom.com/weston6.jpg
http://www.myradioroom.com/weston7.jpg

Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3429. Elenco Sg-9500 RF signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:49:40 UTC
From: Joshua P Luben <josh@ebard.net>
Message-ID: <3ec1140e$1@nntp0.pdx.net>
Source record: 35482
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I have an SG-9500 for sale for $180 including shipping. It is in excellent working condition. I am the original owner. Pictures connected to a oscilloscope are available upon request.

josh

Wide Band Signal Generator with Frequency Counter
Frequency on 6 ranges 100KHz to 150MHz (450MHz on harmonics)
Frequency accuracy 1PPM ±1 count
RF Output approx. 100MV to 35MHz
Crystal Output 1-15MHz uses HC 6/U holder
Output Attenuator Hi-Lo Switch with fine adjuster
Modulation Internal 1KHz
External 50Hz to 20KHz
Audio Output 1KHz at 1V RMS
Power 120V or 220V 50 or 60Hz
SG-9500 Frequence Counter
Range 1Hz to 150MHz in 2 ranges
Resolution 1Hz to 10Hz
Gate Time .1 sec, 1 sec
Input Sensitivity Less than 50MV RMS
Input Impedence 1M ohm
Accuracy 1PPM ± 1 count
Operation Temp 0-40°C
Digital Display 5 digit .56 LED

3430. FS: GENERAL RADIO W10 VARIAC, Brand-New! w/pics

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 15:54:39 UTC
From: rlucch2098@aol.com
Message-ID: <20030513115439.08674.00000220@mb-m22.aol.com>
Source record: 35483

Hi All;
I have for sale a Brand-New w/bag-o-screws, never used VARIAC by the GENERAL RADIO Corp., Model is W10.
You your own enclosure, rated at 0-120 vac @10 amps.
Made in the USA to last a lifetime.
It is NOT CHINESE JUNK!
Price is $100 + UPS!(B/O?)
Pics>>
http://www.myradioroom.com/grvariac1.jpg
http://www.myradioroom.com/grvariac2.jpg
http://www.myradioroom.com/grvariac3.jpg
http://www.myradioroom.com/grvariac4.jpg
73......Rich WA2RQY

3431. Re: E.F. Johnson Roller Coaster: Specs Required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 16:29:24 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <b9r6dh$mgrcv$1@ID-150848.news.dfncis.de>
Source record: 35484

"ï¿½R.L. Measures" <^2@vc.net> wrote in message
news:^2-130503065748000l@192.168.1.200...
> In article <b9qph5$lvl3h$1@ID-150848.news.dfncis.de>, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> >
>http://www.colomor.demon.co.uk/images/Roller%20coaster%20EF%20Johnson.j
> > pg<
> >
> > Does anyone have the specs for the above roller coaster?
> >
> > Part number seems to be: 24.298-2
> >
> > TIA. Rich.
>
> ** that looks like an ancient one. If it is wound with #12 wire, 5A
CCS
> @ 30MHz, and #10 wire is good for c, 7A.

Thanks.

One way or another I'll try to figure out how many watts it can handle.
Ought to be good for up to 100 watts I should think. I know it's 37
turns, 30uH.

3432. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 17:53:11 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <PtycnYfvMPSvrFyjXTWcoQ@cnmnetwork.com>
Source record: 35485
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Air core RF transformers are very practical and in general outperform those with solid cores. It's just that they are larger.

Inductance is necessary because the primary current includes both reactive (due to inductance and reflected reactance) and resistive (load real power) components. If inductance is too low, the primary current will rise to a point where it might cause a problem with the source.

With solid cores, there needs to be some primary current that can be used to magnetize the core. This current has no external function but must be provided by the source.

Transformer theory is not trivial, and can't be given in a few words.

73, Bob K6DDX

3433. Need help-PIN diodes!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 17:57:48 UTC
From: anandnavaneeth@hotmail.com
Message-ID: <bc6bd131.0305130957.65338b1d@posting.google.com>
Source record: 35486

Hi there,
I am doing thesis on reconfigurable antenna. This will be
hard to explain but i will try my best. I have to connect a post to
the ground plane of the antenna thru a capacitor and PIN diode like
this.

(post)0---PINdiode---||---GROUND.

Whenever i add PIN diode, its giving me loss however i am able to
switch. Kindly help me in as to which PIN diode to use. I am presently
using UPP1004 and i am working in the 3GHz range. I need your
expertise.

Thank you.

3434. Re: FS: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 18:06:24 UTC
From: chrishelpfl@aol.com
Message-ID: <1a18886f.0305131006.ad3e395@posting.google.com>
Source record: 35487
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

Mike Nowlen <mnowlen@comcast.net> wrote in message
news:<qbfqbvca3s348ad4q7gbov0d6j3hr60abb@4ax.com>...
> GENERAL ELECTRIC TF4RX02NA Power Transformer
>
> Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
> Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
> 115,120,126, and 132 Volts. Potted in military style case with
> terminals. 6 3/4 H" x 5"W x 4 1/4"D Weight: 20 Lbs. Great for 200-300
> Watt Solid State Amp.
>
> Picture at:
> http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg
>
> Very Good Condition, Tested and working.
> Two available.
> $50 each + Shipping
> Send zip code for estimate
>
> Please reply via e-mail or telephone
>
> Thanks for reading.
>
> Mike Nowlen
> mnowlen@comcast.net

STILL no takers! try reducing the price.

3435. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 18:53:46 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87k7cuoeyt.fld@barrow.com>
Source record: 35488

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <874r46n0mo.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>
>>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>>I understand that you probably don't have much to do up there until the snow
>>
>>You probably don't understand anything at all about what there
>>is to do here, or not. But like everything in this thread, your
>>imagination is used as a substitute when in doubt.
>
>We can either argue with logic or take cheap shots at each other, but we can't
>do both. It's your choice.

YOU are the one taking cheap shots, or at least trying to.
That is *your* choice and I have nothing to do with it.

And you still want to take a "cheap shots" in this article
at every point too, it's filled with them because you don't seem
to be able to marshal up enough facts to support your opinions.

>The source of the discussion was WIRELESS devices, which was -VERY- relevant.
>You can't obfuscate that fact, so don't even try.

You are continuously bringing it up, as if it is something
significant that necessarily makes the FCC into what it isn't
(an agency to investigate criminal activity) and to exclude
other agencies.

Whatever, lets get on with a lecture on law, the FCC, administrative
regulations, etc. etc. Regardless of you much you fume as this
begins, by the end I do expect to not hear another peep out of you
unless it is an apology.

>>>First, there is the question of legality. From the CFR Title 47:
>>
>>What, exactly, are the criminal penalties for violation of a CFR?
>
>Don't you understand the concept of the punishment being commensurate with the
>crime?

Another absurd cheap shot. Which is hilarious considering that
you *clearly* do not understand the relationship the FCC has
with the law, much less with other Federal agencies such as the
Department of Justice.

My point was that CFR's are exactly commensurate with the crime.
The level they rise to is administrative censure and fines.

That is what the FCC handles, not criminal investigations which
are precisely what the FBI does for the US Department of
Justice. The FCC does *not* prosecute criminal violations of
the Communications Act, but only handles administrative actions
for rules violations relating to CFR's.

Your statements that the FCC handles criminal complaints and
investigations is totally bogus.

>>Aren't we just a little more interested in the Communications Act of
>>1934 as ammended, and a few others from the US Code?
>
>Is there something that you don't understand about law and punishment?

Cheap shots seem to by your only avenue here, since you lack
facts.

In fact, US Code is what Congress passes and the President
signs. Regulations are the administrative rules to
implementation regulation that the law says must be done. There
can be *no* criminal violation of a CFR unless US Code says it
is a crime. The FCC *cannot* write something into a CFR which
makes criminal anything which is not criminal under US Code.

>>Here is where you can find what makes the description given by
>>the OP a potentially criminal case. (Note that it has virtually
>>nothing to do with the FCC or licensed operation of radio
>>equipment.)
>
>Say WHAT? Are you saying that eavesdropping using radio equipment has nothing to
>do with radio equipment?

The fact that it is a crime has nothing to do with whether the
equipment used is "radio equipment" or not, licensed or
otherwise. The law makes it perfectly clear that it is
electronic _eavesdropping_ that is illegal.

>And that the FCC has nothing to do with radio
>equipment? PLEASE don't tell me that you don't see the connection!!!!

The FCC does not do criminal investigation of electronic
eavesdropping, whether it involves radios or otherwise.

>> Note that this one law makes both a wiretap illegal
>>*and* makes equally illegal the use of a radio device (licensed
>>or otherwise) to intercept "oral" communications.
>
>As I quoted, Parts 2 and 15 of CFR Title 47 cover licensed and unlicensed radio
>equipment, respectively. The two regulations cover both bases. Your quote merely
>defines exclusions that do not extend beyond the exclusions in the regulations I
>quoted. Regardless:

The CFR's that you quoted do not, and cannot, make it a crime.
The US Code is what makes eavesdropping with electronic
equipment a crime.

>> "&#65533; 2511.

Look carefully at the above line and notice that it starts with
a quotation mark. That indicates I quoted it from a source
other than myself. And I correctly cited my source too.

>Subsection of what? Which title? Which section? If you are going to quote the
>law, at least learn to quote properly. Oddly enough, the law you cite below (but

Since I quoted that from another source you are saying that my
source did not correctly cite US Code, we can all have a good
laugh at your abject ignorance of how to cite or reference
quotes. The source of _my_ quote was properly cited (see the
URL below) and from that cite you can look at the original
material from which I quoted.

You are claiming that the Cornell School of Law web site doesn't
know how to cite US Code. How hilarious can you get!

>fail to quote in completeness) supports my argument.

It specifically denies your argument. Or, at least it does
if you understand what it says. We'll get to that later.

>>Perhaps you should revue then entire law in detail.
>>
>> http://www4.law.cornell.edu/uscode/18/2510.html

And there you are; a proper cite for what I quoted.

>Perhaps you should "revue then entire law in detail" yourself, Floyd. The law
>you cite defines the exclusions established in Parts 2 and 15 of Title 47, as
>previously quoted:

US Code does not define exclusions for CFR 47 (it defines
inclusions, because it states what the CFR's are required to
implement). Any such CFR exclusions must necessarily be part of
the CFR. CFR 47 is the administrative rules to implement
regulation of what is in US Code.

You have which establishes law backwards.

>>So if you and I violate the above, the FCC can yank our tickets!
>>Whoop dee doo!
>
>Only Part 97 of Title 47 is about amateur radio licenses, or "tickets". You

Do you think that an amateur license can be pulled only for
violations of Part 97? I've got news for you... an Amateur
Radio license, as well as any commercial licenses issued by the
FCC, can be pulled for violations of *any* FCC regulation. That
is what I meant above when I mentioned "administrative censure".

>should really study this material before you publically make an ass or yourself
>on the newsgroup. (BTW, you do know that all these posts are archived for
>posterity, don't you? Maybe you want to think about your next post before you
>spout off more ignorance and make fools of your progeny.)

Ah, now it is not only me you take cheap shots at, but my
children too. Are you talking, when you speak of fools, about
my progeny that calls me up now and then for technical advice?
She's a pretty technical gal herself, and doesn't suffer fools
like you very well at all. She's the one with a law degree; I
give her technical advice on communications and she gives me
technical advice on law. You should have a lawyer give you
some advice too.

>You are starting to sound like those paranoid whackos who think that
>'regulations' are not 'laws'. In case you missed the first page, "CFR" stands
>for "Code of Federal Regulations" which is LAW (as proclaimed by Congress,
>established by presidential acceptance, and supported by judicial authority),
>the violation of which is a CRIME. Is there something you don't understand here?

I don't understand how you can think CFR's are "LAW" proclaimed
by Congress (the aren't), I also don't know what "presidential
acceptance" is (CFRs are not presented to the President for
acceptance), or how "judicial authority" supports CFR 47, though
it does support court rules on evidence and procedure for
courts. You've spent your wad on big words, but it doesn't seem
that you know what they mean.

The LAW proclaimed by Congress is the US Code. CFR's are the
administrative rules formulated by the Commission, which reports
directly to Congress even though it is managed by Presidential
appointees, to implement the requirements of US Code. Nothing
in a CFR is "against the law" unless the regulation is backed by
US Code to make it a violation. The Commissioners cannot decide
on their own what is or is not criminal. They can only write
rules to administer the laws passed by Congress.

>The FCC is as much a law enforcement agency as it is a "regulatory" agency -- it
>enforces federal 'regulations' -- duh! (Maybe the problem is that there was
>never a TV sitcom based on the FCC...?)

It administers regulations. The regulations are intended to
enforce the law. (More cheap shots, eh? You might be able to
write TV sitcoms, but I'm more into technical writing myself.
Fiction doesn't appeal to me the way it does to you.)

>>But if you want the same party charged with criminal use of that
>>equipment, call the FBI.
>
>Do you actually think that the FBI is the only federal law enforcement agency?
>Get a clue: www.rainreport.com

I did not make any such statement, but you are clearly
indicating that you think when I say the FBI is the correct

agency means it is the only agency.

It is still true that if you want a person charged with criminal
eavesdropping under Federal law, your best bet (actually it is
your *only* good bet) is the FBI because quite frankly every
other agency is going to investigate only to the point where
they can determine there is probable cause, and at that point
they will turn it over to the FBI. As I've said repeatedly,
the FBI does the criminal investigations, not the FCC.

>>In fact, both may be involved, but the most significant
>>difference is that the FCC has relatively very few field
>>personal and they are engineers not law enforcement, while the
>>FBI has many and they have authority conduct criminal
>>investigations.
>
>In -FACT-, the FCC has MANY people charged with enforcing FCC regulations. Check
>out www.fcc.gov

How many investigate criminal conduct? Non-compliance with
FCC regulations does not define criminal conduct.

>>Perhaps *you* happen to live close to the only seriously active
>>FCC office in the country, but 200,000,000+ Americans don't.
>>They should contact the local FBI or other law enforcement
>>agencies if they want any chance at all for some kind of action.
>
>In -ANY- state, even Alaska, the FCC will get involved -VERY- quickly if you can

That is simply not true. There is no point in you spouting
ignorance about things you don't know diddly squat about.

>show that there has been a serious violation. Jamming an active PSP freq is a
>serious violation. Period. Do you disagree? If you do, I invite you to jam your

I've seen it go on for *weeks* with not even a hint of FCC
activity.

>local PSP freqs and see just how long it takes for the FCC to shut you down
>(i.e, lock you up). I suspect that it won't take them much longer than a week,
>probably less. Care to make a wager?

PSP freqs here could be jammed for *months* and not get a rise
out of the FCC!

Of course again, you are guessing and I am not. Your vivid
imagination cannot sit with the idea that the FCC isn't going to
send in a swat team.

You do realize that the FCC does not have technical staff in
Alaska? And that I am located 700 miles from the nearest FCC
person of any kind (and probably more than 2000 miles from the
nearest field rep!)?

Did you think they'd have a couple guys drive over for the
afternoon do check this out?

>>>to these regulations: First, the device must be an authorized radio device,
>>>which is clearly the sole jurisdiction of the FCC. Second, they may only be used
>>
>>It is the sole jurisdiction of the FCC to administrate the
>>authorization of said radio device. It is not the sole
>>jurisdiction of the FCC to deal with criminal operation of said
>>device.
>
>You still can't seperate the two concepts: criminal OPERATION OF such devices,
>and criminal ACTIVITY USING such devices. Regardless, the FCC is the agency that
>has jurisdiction in BOTH instances, as previously noted.

You can continue to say that, but is still is not true. The FCC
administers the regulations. The FBI has jurisdiction over
criminal investigations.

>>Which do you want, a criminal investigation or a letter to the
>>perpetrator demanding that the device be properly licensed and
>>operated?
>
>If you can cite even ONE case where electronic surveillance has resulted in
>nothing more than an NAL, I will concede such a lame excuse. You can't,
>therefore I won't.

I can multiple cite cases (I've mentioned two already) where it
didn't even get that! Your concession is noted for the record.
We could also cite the Linda Tripp case and there was another one
a while back where a Congress critter had a tape that was illegally
recorded. Look them up! The FCC didn't do *anything*. That is
simply because criminal investigations are the FBI's jurisdiction.

Now, can you cite a case where the FCC (as opposed to the FBI
for example) has either investigate or pressed criminal charges,
much less prosecuted?

>>>by "law enforcement officers conducted under lawful authority". That phrase, or
>>>anything like it, doesn't appear in any other federal regulation, and therefore
>>>the sole jurisdiction AGAIN rests with the FCC. So even if the devices ARE
>>
>>Your logic is a bit confused. How does that phrase give "sole"
>>jurisdiction to the FCC???
>
>Because the responsibility is not given to any other agency.

Except you are wrong; it is.

>The logic is by
>inclusive authority -- pretty basic stuff. Did you even study logic? If you
>didn't, don't even go there. If you did, should I draw you a Venn diagram?

Lets see your Venn diagram.

Your problem is that "inclusive authority" is not exclusive and
where your diagram is going to overlap will show exactly what
I've been describing. What you'll also find is that just as I've
said, criminal investigations are not what the FCC does.

>>And it has *nothing* to do with whether the device is license or
>>not.
>
>OTC, it does. LE agencies are not allowed to use unauthorized devices.

But that is not what will make any give instance of eavesdropping
legal or illegal. If an agency is legally allowed to eavesdrop and it
is found that the devices used were not properly licensed, that does
not make the eavesdropping illegal. Likewise it is obvious that
properly licensed devices is not what legalizes eavesdropping.

The FCC is concerned with the licensing, the FBI is that agency
concerned with criminal eavesdropping.

>>investigate. How many criminal investigators does the FCC
>>employ full time?
>
>More than you might think (but not enough, IMO).

Well just name one within 500 miles of me, for example. Or
lets loosen it up a bit. How about within 2000 miles of me?

>>And just as obviously when the wiretap does involve radio
>>devices... the FCC is just as involved (and equally
>>unavailable).
>
>They don't have the time or resources to hunt down every little snap, crackle
>and pop in someone's cellphone, which is what would happen if they investigated
>every paranoid rant. Show them some -real- evidence and they will be all over it
>like white on rice -- I shit you not.

Your imagination runs wild.

>>Regardless, you did notice that CFR 47 is titled
>>"Telecommunications", not "Wireless Telecommunications", right?
>>They have exactly the same jurisdiction over non-wireless
>>telephone systems as they do over wireless telephone systems.
>
>If you are going to quote the law, first show at least a superficial attempt to
>understand it. And here's a good start: where in Title 47 does it say anything
>about eavesdropping on wired communications? When you find that part then maybe
>then you can try and prove your assumption that the FCC has "exactly the same
>jurisdiction over non-wireless telephone systems as they do over wireless
>telephone systems". Otherwise, you should make a sincere attempt to understand
>what the word "federal" means, and why your assumption is wrong.

If CFR 47 says nothing about eavesdropping on wired communications,
then you say that proves they don't have jurisdiction over non-wireless
telephone systems as hey do over wireless telephone systems????

Maybe you'd best draw a diagram on that one too!

>>>IOW, you have to know what crime is being violated before you can determine
>>>jurisdiction, and therefore contact the appropriate agency. Evidently, you don't
>>>know the difference.
>>
>>The FBI is going to have jurisdiction if there is a violation of
>>Federal law.
>
>Oh, come on now. If you think that the FBI is the only federal law enforcement
>agency then you have been watching too much TV. Don't plead ignorance here: If
>you break a tax law, do you think that the IRS is going to take a backseat to
>the FBI? Do you really think the readers of this newsgroup are THAT stupid?

More cheap shots because you cannot logically argue with facts
that the FBI does not have jurisdiction. The facts are that the
FBI does have jurisdiction.

It makes no difference if there are 30, 40 or 4000 other police
agencies under the Federal umbrella, the point is that the IRS
does not have jurisdiction, nor does the INS, nor does the Coast
Guard, nor does the Border Patrol, nor do FDA meat inspectors,
or Fish and Wildlife officers or the Secret Service. Or the FCC.

The FBI does have that jurisdiction.

>>You were claiming that the OP being wrong makes you right.
>
>I said nothing of the sort, Floyd.

Bullshit.

>> I've
>>not made any such claim.
>
>Your implication was that we were both wrong, again totally ignoring the fact
>that the OP was only asking a question.

I didn't say anything about an opinion by the OP, I just said
that your claim of a dichotomy was wrong. You claimed he was
wrong and that made you right. I just said there is no such
logical connection, because you could *both* be wrong, hence
your argument that he was wrong was a non-sequitur.

>So are you so bored that you want to argue this even further?

Why is it you can't discuss something without a cheap shot in
every other paragraph at a minimum? That line begs the question
of why you are so bored that you make up all of this imaginary
crap and post it. You mentioned that Usenet is archived (though
how you come to think that would make a fool of your children
instead of you I'm not sure) and it is clear that the true
significance of that archive hasn't yet sunk in. Maybe you just
haven't been reading news long enough to have the enormity of

writing for posterity sink in yet!

Whatever, lets end this stupidity of you blabbering away arguing with me. There are better things and people for you to argue with.

For example, here is one thing you probably don't really want to argue about, even with me:

The FBI is the principal investigative arm of the United States Department of Justice.

And that leads to someone you don't really want to argue with at all when it comes to law and the FCC, a fellow named William E. Kennard.

"Section 705 of the Communications Act includes criminal penalties. Accordingly, and in light of its close relationship to the wiretapping and related provisions of the criminal code, and at the request of the Department of Justice (DOJ), it is the FCC's longstanding general practice to coordinate complaints regarding potential violations of section 705 with DOJ in order to make sure that our administrative actions do not interfere with any DOJ criminal investigation. This is in accordance with a Memorandum of Understanding (MOU) with DOJ (effective since 1953 and revised and re-executed in 1989). The MOU specifically states that DOJ assumes responsibility for conducting investigations into complaints of alleged criminal violations of Section 705, and the Commission is to provide technical assistance when specifically requested by DOJ."

William E. Kennard providing testimony to Congress on February 5th, 1997.

It seems your claim that the FCC investigates criminal complaints and calls in the FBI is exactly backwards. The FCC will *not* investigate until the DOJ (hence the FBI) has completed their investigation and or specifically requests assistance from the FCC (as in it never happens).

Oh, Mr. Kennard spoke to the Subcommittee on Telecommunications, Trade and Consumer Protection U.S. House of Representatives as the General Counsel for the Federal Communications Commission, hence we can stipulate that what he said is true in spite of your opinions to the contrary.

So lets not hear another round of your false claims and cheap shots.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3436. WTB: 50A1 tube for receiver. "reasonable" please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 19:39:10 UTC
From: Skipp <replytotheaddressbelowpleasenotthisone@yahoo.com>
Message-ID: <b9rhku$4um$1@woodrow.ucdavis.edu>
Source record: 35489
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.swap

Looking (for a friend of course) for a 50A1 "ballast tube" for a multi band tube receiver.

I see net dealers with them with some crazy prices.

If you have one you'd care to part with, I'd like to try and buy it at a reasonable price. Please drop me a reply using the Email address below (cut and paste), not the one that appears in the reply header.

I'd also be willing to trade you for some type of tube you might need/want. I plan on giving the 50A1 away to someone, so even a working used one would work.

I've also read about solid state replacements for the 50A1. If you can provide me a refernce article on the web, I'll just make him one. I hate to reinvent the wheel.

thanks much for reading this

cheers

skipp

skippNOSPAMPLEASE@pilot.ucdavis.edu

Take the NOSPAMPLEASE out to reply, thanks.

http://sonic.ucdavis.edu

3437. Re: 50A1 tube for receiver. "reasonable" please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 20:05:33 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3ec14fb2$0$48891$edfadb0f@dtext02.news.tele.dk>
Source record: 35490
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.swap

Hello Skipp

> I've also read about solid state replacements for the 50A1. If you can
> provide me a refernce article on the web, I'll just make him one. I hate
> to reinvent the wheel.

You can buy a solid state replacement for 17$ at
http://www.tubesandmore.com/

Regards Max

3438. Re: E.F. Johnson Roller Coaster: Specs Required

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 20:15:15 UTC
From: ^2@vc.net
Message-ID: <^2-1305031315150001@192.168.1.200>
Source record: 35491

In article <b9r6dh$mgrcv$1@ID-150848.news.dfncis.de>, "Richard"
<nearlynews_email@ntlworld.com> wrote:

> "�R.L. Measures" <^2@vc.net> wrote in message
> news:^2-1305030657480001@192.168.1.200...
> > In article <b9qph5$lvl3h$1@ID-150848.news.dfncis.de>, "Richard"
> > <nearlynews_email@ntlworld.com> wrote:
> >
> > >
> > >http://www.colomor.demon.co.uk/images/Roller%20coaster%20EF%20Johnson.j
> > > pg<
> > >
> > > Does anyone have the specs for the above roller coaster?
> > >
> > > Part number seems to be: 24.298-2
> > >
> > > TIA. Rich.
> >
> > ** that looks like an ancient one. If it is wound with #12 wire, 5A
> CCS
> > @ 30MHz, and #10 wire is good for c, 7A.
>
> Thanks.
>
> One way or another I'll try to figure out how many watts it can handle.

 since P = I^2 x R, #12 wire will handle 1250w in RTTY mode, and
probably 3x that in SSB mode.

have phun.

> Ought to be good for up to 100 watts I should think. I know it's 37
> turns, 30uH.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3439. Ceramic Insulators ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-13 20:40:48 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <b9rl8g$ub8$1@newsg3.svr.pol.co.uk>
Source record: 35492

Can anyone tell me where in the UK
I can buy the above ?

Thanks !

MikeT ...
M0AWS

3440. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 01:02:56 UTC
From: averyfineman@aol.com
Message-ID: <20030513210256.18773.00000427@mb-m26.aol.com>
Source record: 35495

In article <f7d9a152.0305121218.61d0e5a9@posting.google.com>,
jason_hsu@my-deja.com (Jason Hsu) writes:

>Could someone please shed some light on what is going on? How much
>inductive reactance is REALLY needed, and what would have happened if
>I did not have enough? Why can't RF transformers use plastic or air
>cores? (They would be much cheaper.)

"What is going on" should be outlined in detail in electronics
texts at your university. That's the best place to realize what
really happens in a "transformer," including its inductance,
interaction between windings, power transfer and loss with
loads of various impedances. Winding resistance, per se, is
associated with power loss within the transformer.

"Reactance" is the equivalent inductive or capacitive component
at ONE frequency. You need to respecify your question as "how
much inductance you need," not reactance without giving any
frequency value. That inductance will be dictated by the desired
operating frequency range...but it is modifiable by many other
things.

What you "really need" in terms of inductance of any winding in
a transformer is related to everything I stated in the first para-
graph above. Using an equivalent model of a transformer is a
good start to better see the relationship of a transformer to its
driving circuit and to its load. Almost any textbook has those.

If you have insufficient inductance for your circuit, you will
probably have some power loss at lower frequencies if untuned
(not resonated at a desired frequency). Many, if not most,
broadband RF transformers have extremely little inductance if
measured open-circuit (without any other connections to driving
circuit or load). An example of low-inductance broadband
transformers with little inductance is the 4:1 impedance matching
transformer for TV adapting a 75 Ohm to 300 Ohm characteristic
characteristic and working over the entire VHF and UHF portion
of the EM spectrum.

There are many, many examples of "air core transformers" in
older amateur radio texts. These are almost exclusively a high
impedance source (power amplifier, 2K to 10K in source
impedance) to a low impedance load (50 to 600 Ohms resistive).
They are also almost all resonated at the primary or high
impedance winding at a single frequency by a capacitor.
Another example is the older 455 KHz Intermediate Amplifier

transformer ("IF can") with both primary and secondary windings resonated at 455 KHz with trimmer capacitors mounted in the shield can. Cheaper AM BC radios used air cores. Slightly more expensive AM BC radios had powdered-iron cores to improve the coefficient of coupling to do two things: The structure could be slightly smaller (less inductance required in windings due to increased inductance effect of the iron core); the relatively narrow passband could be shaped to a more even amplitude response through control of the coefficient of coupling.

Air core transformers have losses primarily from the loss of the resonating capacitance and the resistance of the winding relative to winding inductance at one frequency. There can be some additional losses due to coupling to the shielding structure (conductive, all around the transformer) and the reduction of inductance from shield proximity.

A powdered-iron core in any inductor (and transformer) will contain the magnetic field closer to the winding itself. In a toroidal inductor (or transformer) the topology/geometry of the torus does the greatest magnetic field containment. Toroids can be very close (relatively speaking to other shapes) to other conductive elements without appreciably changing the open or away-from any other conductive element inductance.

"Blank" toroidal cores are a standard catalog item such as in the Micrometals product list. That "core" is solid plastic and will have little effect relative to a completely air core toroid. It is very hard to make a self-supporting, completely air-core toroid but it can be done. The magnetic field is less contained than with a powdered-iron core material but that field is still contained more than with a solenoidal core structure.

At lower frequencies, such as AF, various solid iron forms will work just fine as laminations (example: E-I plates) or wound tape (as in toroids). The AF range is several decades of frequency in bandwidth. Very broadband AF transformers, as in old "Hi-Fi" or music systems, can have relatively flat power transfer from 30 to 15,000 Hz, almost 3 decades. Their high frequency response is dictated more by circuit and distributed capacity across the primary windings. The low frequency response is dictated by the permeability of the iron core.

Core material will always affect the inductance value and the coupling of multiple windings on the same core as with transformers. Core material and its form (sheet, tape, or powder) will be broadly frequency sensitive. Certain materials work best at certain octave to decade wide bands for best power transfer in transformers and for least loss component in single inductors.

A good example of very low winding inductance transformers over a decade bandwidth is the "binocular" shape low-impedance matching transformer in most modern-day transistor power amplifiers. The primary winding inductance is on the order of a microhenry for a source impedance of 100 to 500 Ohms and a secondary load impedance of about 50 Ohms. But, the low-frequency end of their operating range is around 3 MHz while the upper frequency end is 30 MHz or more and power transfer is relatively flat over the decade bandwidth. How?

The "how" is more complex than realized. Going back to basics, a secondary winding reflects the secondary load impedance to the primary's driving circuit...but that load impedance is changed in magnitude by several factors, primarily the turns ratio of the two windings; secondarily by the magnetic field coupling between the two windings (or others if multi-winding). A part of the latter is frequency sensitivity to core material other than air. "Looking at" the primary when the secondary is loaded with a pure resistance will show a combination of the primary winding inductance plus the transformed secondary winding inductance as the reactive part at one frequency AND the transformed load resistance plus any loss component of both windings. The impedance presented to the driving circuit is largely resistive. Reactive components of that impedance only begin to manifest themselves (usually) at the higher frequency end. Low frequency end is affected (like the AF transformer example) by the permeability and resultant coupling of the core material, several powdered-iron toroids in two stacks of several toroids each.

With tuned air-core transformers it is almost the same within the resonance range. Resistance components of an impedance predominate, the "transformation" governed by relative turns ratios and amount of magnetic field coupling. Away from resonance the reactive components predominate and the other-winding impedance reflection is much reduced...power transfer from one winding to another is also greatly reduced.

There is some slight parallel to L-C filter structures when compared to an equivalent circuit of a transformer (see various texts). L-C filter structures can also affect a "transformation" of load to source impedance (and vice-versa) but that requires a much deeper examination of the complex voltages and currents circulating in the branches of a filter, in-band as well as out-of-band. In a filter's bandpass, the impedance trans-formation is still a complex matter but a resistive load will show up transformed at the source end (and vice-versa).

A much easier route for homebrewers is to examine how others do their transforming over a specified frequency range and then just copy that. Not a crime or ethical badness. Saves a heap of time which few of us have to spare. If you want "answers" for an academic report you will have to hit the books and figure

it out for yourself. The material IS out there in the libraries.

Len Anderson
retired (from regular hours) electronic engineer person

3441. Re: PSU needed can you help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 01:02:58 UTC
From: averyfineman@aol.com
Message-ID: <20030513210258.18773.00000428@mb-m26.aol.com>
Source record: 35493

In article <4b3d627.0305120626.7c770e1f@posting.google.com>, cgraber@fwi.com (Sonicguru) writes:

>Greetings Again everyone
>
>sorry to post this unrelated laser question just thought maybe one of
>you electron focused brainiac's (-; might be able to shed some light
>on this for me!
>
>problem:
>
>Working on a rather cool full wave electro-acoustic resonator and need
>to drive a rather large piezo stack with 600-800v at 5.6khz-23.7khz
>adjustable sine wave output...
>
>current will be somwhere between 125ma-250ma depending on the quantity
>of wafers I end up with in the stack and it needs to be quite linear
>in output.
>
>Any Idea's poping into your head at the moment?
>
>No audio application amps will swing bigger than 110-125v in bridge
>mode typically and I can't for the life of me think of a transformer
>type that will be anywhere close to the step (8 or 9 to 1) I need and
>yet capable of efficient inductance at that freq.
>
>most audio related big transformers work very poor above 15khz and
>really are quite useless at 18khz+

Not necessarily true. That depends on their core material. There are different grades of iron laminations and that is more pronounced with the "wrapped" iron toroidal cores.

Many years ago I obtained some E-I laminations in order to deliberately try to limit high frequency response at a 25 W power level above 3 KHz. When completed, it worked just fine on out to 20 KHz within a db. Wrong ID on the freebie core material. Bought some specific E-I laminations and did it again, this time achieving success. :-) :-(

You will probably not find what you need in stocked, ready-to-use component catalogs. Transformer design and manufacture has become limited and applications-oriented to different disciplines in electronics.

>Do any of you know of a cascaded output section amplifier topology
>capable of swinging this kind of amplitude at freq?

Several. MOSFETs and IGFETs are available on the market today with 1.5 KV breakdowns and higher, conduction capability to several Amperes. You can select those through site search engines at Digi-Key, Mouser, Allied, Newark websites; Digi-Key website has links direct to most carried-product datasheets from the manufacturers. Typical operating rates can go to 100 KHz.

The circuit topologies might be found in industrial control electronics texts or industrial control manufacturers' literature. You might find something similar in industrial ultrasonic cleaning equipment electronics units. Sonar transducer drivers seems a place to look to me, but I've never worked on sonar.

>Many thanks for anyone with ventured knowledge or just thoughts...

Is linear amplification an absolute must in your application? If not and you can go with pulse-width modulation of 50 to 100 KHz switching, possibly followed by lowpass filtering, would be the easier route.

Len Anderson
retired (from regular hours) electronic engineer person

3442. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 01:03:00 UTC
From: averyfineman@aol.com
Message-ID: <20030513210300.18773.00000429@mb-m26.aol.com>
Source record: 35494

In article <abp0cv0ek4si9nu8hpjuqk6177uua6cdts@4ax.com>, Paul Burridge
<redscar@waitrose.notformail.com> writes:

>On 12 May 2003 03:22:10 GMT, averyfineman@aol.com (Avery Fineman)
>wrote:
>
>> For cleaning and polishing the foil surface, the ordinary B&D
>> "Scrub Buster" works well, is cordless and waterproof, comes
>> with at least two standard plastic "steel wool" pads that un-
>> mount easily for cleaning or changing. Most any kitchen sink
>> cleaner works fine with that. No "mods" required.
>
>I find acetone to be the best stuff to use, both for cleaning the
>scrubbed board prior to marking out, and to remove the marker pen
>afterwards. It really gets all the crap off like nothing else.

Acetone is a good solvent for nearly all marker pen ink, lacquers,
acetate and nitrate adhesives, polyester and polystyrene, and
most epoxy resins used in making epoxy-fiberglass and
"casting plastic" things. Michael's craft stores sometimes have
acetone, usually have casting plastic and hardener.

OSH (Orchard Supply Hardware) stores carry one-quart cans of
acetone packaged by W.M.Barr & Co., Memphis, TN, for about
$5 (approximately...I stock up from them periodically with other
goodies from time to time) under "Klean-Strip" label. That metal
can has a very tight snap-off, snap-on seal much needed since
acetone is very volatile, evaporates very quickly.

I've been around acetone since teen age times of the late 1940s
and learned to respect its volatility way back in prehistory. Never
had any allergic reaction of any kind to the stuff but some humans
do, physiologically or psychologically (sometimes both). Never
used acetone in a small closed room with no air movement, EVER.
Evaporation is VERY quick. I use it in the garage with the garage
door open. If I am in the workshop, the little fan in there is turned
on when the acetone container is open to the air.

The same precautions should be used with MEK (methyl ethyl
ketone) and toluene and similar "industrial grade" solvents used
for the same purpose. I've not had any reactions to those, either,
but I'm not about to do any worst-case testing using my body...

For one-of-a-kind sloppy-tolerance PCB resist purposes I've been
using the same pale-blue-pigmented acetate-based "model
airplane dope" half-pint bottle from Testors that I got there in

1948. That lacquer was replaced by the modified solvent base "hot fuel proof" lacquers still sold today in model hobby shops. That old "dope" (colloquial name, obviously not PC - politically correct) is much like most nail decoration lacquer. Thinned out slightly and applied with a small, pointed brush it is a very good resist for use with ferric chloride etchant. I do full-size layouts on paper, use that for a drill guide, drill first then apply the lacquer using the paper layout with the drilled holes as a positioning guide. After etching I do a thorough water rinse of the board to remove etchant from nooks and crannies in the PCB, then take a sharp (X-Acto brand) hobby knife to lift off the lacquer...which is returned to the bottle with some added acetone to "melt" it back into its ancestral form. By now the bottle of "dope" is down to a quarter-inch layer at the bottom, needs replenishing for the next half-century. :-)

That PCB etching method works fine for me, is convenient. Other ways of resist and application, other etchants are fine, too.

Sanford pen and ink products are carried in Office Depot and Office Max stores. I'm not fond of the Sanford "Sharpie" since they don't have control on the pen tip's ink trace width to suit 0.1 inch spacings. The Sanford "Expo" pens with "bold color dry erase" ink is worse in my findings...very good for ordinary markings, though, holds great on clear plastic film wrapping tape or cardboard and acetone can clean it off any non-porous surface.

Len Anderson
retired (from regular hours) electronic engineer person

3443. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 02:45:13 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <cer2cv0lrvn7e8h30t3k8jjiuqn1i9qo6b@4ax.com>
Source record: 35496

In <87k7cuoeyt.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Blah, blah, blah...
<snip>

Let's cut to the chase: Here's a few links and law for you to check out at your convenience:

The FCC -does- conduct investigations:
http://www4.law.cornell.edu/uscode/47/403.html
http://www.fcc.gov/eb/

The FCC -does- pursue criminal matters:
http://www4.law.cornell.edu/uscode/47/501.html
http://www.fcc.gov/eb/News_Releases/DOC-225890A1.html

The CFR is just as much 'law' as the USC:
http://www4.law.cornell.edu/uscode/47/154.html subsection(i)
http://www4.law.cornell.edu/uscode/47/303.html subsection(n)

Simply put, the "law" is composed of rules, statutes, codes, regulations, etc. They are all "law" and are all equally enforcable. Now let's get right to the point: Where, in ANY law or ANY regulation or ANY code, does it say that legality is irrelevant?

>So lets not hear another round of your false claims and
>cheap shots.

Then next time don't start it off with shit like, "You are imagining things here" and, "You are going off the deep end with fantasy on every part of this". You might have had some bad experiences with federal law enforcement in the past, but you can't tell me that the FCC doesn't investigate wireless bugs when I know for a fact that they do, and I have seen it first-hand. So unless you have a letter from Powell himself saying that they don't do that anymore, your legal 'opinions' carry as much weight as a gender-dysphoric snail.

Now go ask your lawyer daughter the legal definition of "Whoop dee doo".

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3444. Need frequency expander circuit to extend range of my IFR-1200S to 2.4 GHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 03:03:14 UTC
From: E-Tech <etech@workbench.com>
Message-ID: <h4c3cv4v30kc5fpq1g4dc9als512gf44f5@4ax.com>
Source record: 35497

Am looking for a low cost commercial unit or homebrew design to extend the range of my IFR-1200S communications service monitor to 2.4 GHz so that I may use the spectrum analyzer to observe signals in that range.

Thanks, Mitch

3445. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 04:00:10 UTC
From: Roger Leone <arleone.takethisout.@inreach.com>
Message-ID: <lcjwa.933$K8.355@news.inreach.com>
Source record: 35498
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Why can't RF transformers use plastic or air
cores? (They would be much cheaper.)

Jason:

I seem to recall that the 0 (zero) mix toroids from Amidon have the same permeability as air and contain no ferrite or powdered iron. They are useful in the VHF region and otherwise have the same benefits as other toroids.

Roger K6XQ

3446. FREE Heathkit information mailing list

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 04:04:06 UTC
From: docky <webmaster@heathkits.com>
Message-ID: <Wejwa.70952$4P1.6470666@newsread2.prod.itd.earthlink.net>
Source record: 35499

--
Want to know more about Heathkits? Have a Heathkit you would like to turn
into cash? Or would you like to find that old Heathkit that you had so much
fun with years ago? join the heathkits.com mailing list. It;s free just
send an e-mail to majordome@heathkits.com and in the main body of the e-mail
type subscribe heathkits 73 Gary K&#65533;IMJ

3447. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 10:19:07 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87el31n84k.fld@barrow.com>
Source record: 35500

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87k7cuoeyt.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>
>>Blah, blah, blah...
><snip>
>
>Let's cut to the chase: Here's a few links and law for you to check out at your
>convenience:

You don't read very well at all Frank. Let me put it all by itself
so you can read it slowly several times:

Section 705 of the Communications Act includes criminal
penalties. Accordingly, and in light of its close
relationship to the wiretapping and related provisions of the
criminal code, and at the request of the Department of
Justice (DOJ), it is the FCC's longstanding general practice
to coordinate complaints regarding potential violations of
section 705 with DOJ in order to make sure that our
administrative actions do not interfere with any DOJ criminal
investigation. This is in accordance with a Memorandum of
Understanding (MOU) with DOJ (effective since 1953 and
revised and re-executed in 1989). The MOU specifically
states that DOJ assumes responsibility for conducting
investigations into complaints of alleged criminal violations
of Section 705, and the Commission is to provide technical
assistance when specifically requested by DOJ. DOJ typically
asks us not to investigate until it has conducted its own
criminal investigation and has made a prosecutorial
determination.

Statement of William E. Kennard, General Counsel Federal
Communications Commission ... February 5, 1997

Nothing in your list of non-sequiturs said anything different
than the above.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3448. ** FLEA at MIT ** Sunday May 18th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 11:14:50 UTC
From: w1gsl@mit.edu
Message-ID: <3ec2252a$0$3938$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 35501
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

+++ Now even more Buyers Parking !!!
Thanks to TKT we have use of their new parking lot
across Albany St from the SWAPFEST !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

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COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday May 18th 2003
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
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Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
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The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

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This year each vendor must have a Cambridge Vendor License.
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To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

FLEA at MIT 2003 Advance Space Application

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

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Address _____ Phone _____ Make Check to
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Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

3449. Re: re-chargeable lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 12:45:04 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vc4elcepsgto32@corp.supernews.com>
Source record: 35502

NiMH's are a lot cheaper and safer than Lithium Ion, but they have a rather prodigious self discharge rate. If you're like me, and the HT sits in the briefcase more than it gets used, the NiMH's are definitely not the answer. But if you use your HT a lot, they really are quite good, and anymore, they are barely more expensive than NiCd's.

Whether they will provide more transmit time, though, is very much a function of the device. The voltage from an NiMH cell drops almost linearly with charge, where a NiCd will hold it's voltage a little longer. A lot of devices can operate down to a fairly low voltage, in which case, an NiMH will last a lot longer than a NiCd. But if the device needs full voltage, the NiMH can be a lot shorter than a NiCd.

As far as Lithium Ion batteries, these things are very dangerous, and need to have a matching charger. One of the reasons they are so expensive is that they have significant protection circuitry built in. In general, they need to have triply redundant protection against overcharge. In terms of their discharge characteristics, they are a lot better than NiMH or NiCd. But without a lot of care, charging them is a life-threatening exercise. This is why individual cells are so hard to come by. To avoid liability, manufacturers generally qualify the charging circuitry before they will sell the batteries.

Don't mess with Lion unless you really know what you are doing. These aren't the same thing as other batteries.

..

"Dick Carroll;" <dixie@townsqr.com> wrote in message
news:b9r3ig$o9q$0@208.206.142.79...
> I use NiMH rechargable cells, they're almost as current dense and
longlived
> as
> the Lithium ion type.
>
> Dick
>
>
> Daniel wrote:
>
> > Dear OM,
> >
> > I'm now looking for some (3.6v or above) re-chargeable lithium battery
to
> > extend the tx time for my Yaesu FT-51R. If you have any information for
> > ordering and shipping to Hongkong, pls send me an email.

> >
> > 73 de vr2udp - Daniel
>

3450. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 15:10:38 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <b9tm9eaor1@freenet9.carleton.ca>
Source record: 35503
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"Roger Leone" (arleone.takethisout.@inreach.com) writes:
> Why can't RF transformers use plastic or air
> cores? (They would be much cheaper.)
>
> Jason:
>
> I seem to recall that the 0 (zero) mix toroids from Amidon have the same
> permeability as air and contain no ferrite or powdered iron. They are
> useful in the VHF region and otherwise have the same benefits as other
> toroids.
>
> Roger K6XQ
>
>
Of course, it's the toroid shape that gives the coil it's self-shielding,
not the core material. I didn't catch this until Doug DeMaw wrote
about it in the mid-seventies.

The core material is needed because the needed inductance is often large
enough that the core helps, or because one is building a broad-band device
and the permability of a ferrite core works in that favor.

By the time you get to inductances low enough that some sort of core
is unnecessary, you're usually talking of a few turns of wire, and why
waste money on a fancy core at that point, when you can just air wind it?
You're probably going to need shielding anyway at those higher frequencies,
so the self-shielding of the donut-shape may be far less important than
at lower frequencies.

I had not noticed that you could buy neutral toroid cores. Doug DeMaw
showed a few that he had made in that article, I think it was a "Hints &
Kinks", but I've not really stumbled on anything that looked suitable
to make into such cores.

Michael VE2BVW

3451. Re: Ceramic Insulators ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 15:20:46 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <b9tmti$mtr7d$1@ID-61331.news.dfncis.de>
Source record: 35504

Try Mainline Electronics who now own the Jackson Brothers range of variable capacitors, and as I recently found out also the old Jackson Brothers range of Stand-off insulators and terminals. See http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm, the insulators aren't on the website yet.

"Mike Tatum" <miket@cybatek.fsnet.co.uk> wrote in message news:b9rl8g$ub8$1@newsg3.svr.pol.co.uk...
> Can anyone tell me where in the UK
> I can buy the above ?
>
> Thanks !
>
> MikeT ...
> M0AWS

3452. Pictures: Elenco Sg-9500 RF signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-14 18:34:42 UTC
From: Joshua P Luben <josh@ebard.net>
Message-ID: <3ec28c3e@nntp0.pdx.net>
Source record: 35505
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

```
http://www.joshluben.com/sg9500/DCP_0416.JPG / front case
http://www.joshluben.com/sg9500/DCP_0417.JPG / top case
http://www.joshluben.com/sg9500/DCP_0418.JPG / back case
http://www.joshluben.com/sg9500/DCP_0419.JPG / other-top-side case
http://www.joshluben.com/sg9500/DCP_0420.JPG / 7.1864mhz w/o mod
http://www.joshluben.com/sg9500/DCP_0421.JPG / 24.9533mhz w/o mod
http://www.joshluben.com/sg9500/DCP_0422.JPG / 150mhz w/ counter
http://www.joshluben.com/sg9500/DCP_0423.JPG / 3.404mhz w/ mod
```

"Joshua P Luben" <josh@ebard.net> wrote in message
news:3ec1140e$1@nntp0.pdx.net...
> I have an SG-9500 for sale for $180 including shipping. It is in excellent
> working condition. I am the original owner. Pictures connected to a
> oscilloscope are available upon request.
>
> josh
>
> Wide Band Signal Generator with Frequency Counter
> Frequency on 6 ranges 100KHz to 150MHz (450MHz on harmonics)
> Frequency accuracy 1PPM ±1 count
> RF Output approx. 100MV to 35MHz
> Crystal Output 1-15MHz uses HC 6/U holder
> Output Attenuator Hi-Lo Switch with fine adjuster
> Modulation Internal 1KHz
> External 50Hz to 20KHz
> Audio Output 1KHz at 1V RMS
> Power 120V or 220V 50 or 60Hz
> SG-9500 Frequence Counter
> Range 1Hz to 150MHz in 2 ranges
> Resolution 1Hz to 10Hz
> Gate Time .1 sec, 1 sec
> Input Sensitivity Less than 50MV RMS
> Input Impedence 1M ohm
> Accuracy 1PPM ± 1 count
> Operation Temp 0-40±C
> Digital Display 5 digit .56 LED
>
>
>

3453. Re: re-chargeable lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 00:31:04 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <b9un48$a48$0@208.207.71.150>
Source record: 35506

xpyttl wrote:

> NiMH's are a lot cheaper and safer than Lithium Ion, but they have a rather
> prodigious self discharge rate. If you're like me, and the HT sits in the
> briefcase more than it gets used, the NiMH's are definitely not the answer.

I've learned, in the past year, that the brand of the cells involved means a lot regarding the selfdischarge rate. Some are relatively longlived while others are definitely not.
When I got the digital camera about a year ago I also purchased a quick charger that came with a set of 4 AA 1800 mA NiMH cells that are marked "Digipower" brand, with no further ID. After a few charge cycles they are very satisfactory in their low selfdischarge rate, lasting up to a couple months or even longer. I later bought two backup sets, one Energizer and the other Ray-o-vac brands. The Ray-o-vac set lasts about as well as the Digipower, after cycling them in over several charges. The Energizers won't hold up more than three weeks.

I also carry set of high quality Alkalines along just in case!

Anecdotal, but might be of interest.

Dick

3454. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 02:17:35 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <ji85cv4e255uvj4501fb41fmra9lusvbt2@4ax.com>
Source record: 35507

In <87el31n84k.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>In <87k7cuoeyt.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>
>>>Blah, blah, blah...
>><snip>
>>
>>Let's cut to the chase: Here's a few links and law for you to check out at your
>>convenience:
>
>You don't read very well at all Frank. Let me put it all by itself
>so you can read it slowly several times:
>
> Section 705 of the Communications Act includes criminal
> penalties.

There is no Section 705; do you mean Section 501?

> Accordingly, and in light of its close
> relationship to the wiretapping and related provisions of the
> criminal code, and at the request of the Department of
> Justice (DOJ), it is the FCC's longstanding general practice
> to coordinate complaints regarding potential violations of
> section 705 with DOJ in order to make sure that our
> administrative actions do not interfere with any DOJ criminal
> investigation.

Which is what I was trying to say before. As in the case of a complaint of
wireless eavesdropping to the FCC, that cooperation exists for the FCC to
determine if the devices are being used for authorized law enforcement
activities as per 47CFR2.701 and 15.9.

> This is in accordance with a Memorandum of
> Understanding (MOU) with DOJ (effective since 1953 and
> revised and re-executed in 1989).

There are literally hundreds of MOUs. You will have to provide a link to the MOU
to which you refer.

> The MOU specifically
> states that DOJ assumes responsibility for conducting
> investigations into complaints of alleged criminal violations
> of Section 705, and the Commission is to provide technical
> assistance when specifically requested by DOJ. DOJ typically
> asks us not to investigate until it has conducted its own

> criminal investigation and has made a prosecutorial
> determination.
>
> Statement of William E. Kennard, General Counsel Federal
> Communications Commission ... February 5, 1997
>
>Nothing in your list of non-sequiturs said anything different
>than the above.

Again, since the MOU refers to a Section that is not (or is no longer) valid,
you will need to provide a link.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3455. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 02:41:13 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <44v5cvs65psb58t9kibsu81noavpp1rafv@4ax.com>
Source record: 35508

In <ji85cv4e255uvj4501fb41fmra9lusvbt2@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> wrote:

>In <87el31n84k.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>
<snip>
>> Section 705 of the Communications Act includes criminal
>> penalties.
>
>There is no Section 705; do you mean Section 501?

Correction: Section 705 of the Communications Act = 47 USC 605 (properly cited),
and like 47 USC 501, provides for imprisonment. But that begs the question: By
'criminal' do you mean only a violation of the law where the punishment may
include imprisonment?

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3456. Re: Need frequency expander circuit to extend range of my IFR-1200S to 2.4 GHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 03:31:42 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305141931.7df458d3@posting.google.com>
Source record: 35509

E-Tech <etech@workbench.com> wrote in message
news:<h4c3cv4v30kc5fpq1g4dc9als512gf44f5@4ax.com>...
> Am looking for a low cost commercial unit or homebrew design to extend
> the range of my IFR-1200S communications service monitor to 2.4 GHz so
> that I may use the spectrum analyzer to observe signals in that range.

I have no idea what frequency range the IFR-1200S covers, but to look
at signals, all you need is a mixer fed with an appropriate LO. It
can help to put a bandpass filter on the front end to avoid images,
and perhaps a preamp if you're wanting to look at low level signals.
But for casual observations, you can just used one of the MiniCircuits
or similar canned DBMs fed by a 50-ohm signal generator for a LO, with
the output feeding a 50-ohm input port on your spectrum analyzer. Add
an input filter and preamp and dedicated LO later if you feel the
need.

Cheers,
Tom

3457. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 11:21:47 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wugslak4.fld@barrow.com>
Source record: 35510

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87el31n84k.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>
>>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>>In <87k7cuoeyt.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>>
>>>>Blah, blah, blah...
>>><snip>
>>>
>>>Let's cut to the chase: Here's a few links and law for you to check out at your
>>>convenience:
>>
>>You don't read very well at all Frank. Let me put it all by itself
>>so you can read it slowly several times:
>>
>> Section 705 of the Communications Act includes criminal
>> penalties.
>
>There is no Section 705; do you mean Section 501?

You are contradicting testimony before a House sub-committee by
the General Counsel to the FCC. Stop being funny.

Besides, you've confused 47 U.S.C. §501 with Section 705 of the
Communications Act as modified. Tsk Tsk, not good for a guy who
claims to be holier than thou when it comes to citing laws and
understanding jurisdictions if you can't even figure out that
47 USC §605 is what he referenced, not 47 USC §501.

>> Accordingly, and in light of its close
>> relationship to the wiretapping and related provisions of the
>> criminal code, and at the request of the Department of
>> Justice (DOJ), it is the FCC's longstanding general practice
>> to coordinate complaints regarding potential violations of
>> section 705 with DOJ in order to make sure that our
>> administrative actions do not interfere with any DOJ criminal
>> investigation.
>
>Which is what I was trying to say before. As in the case of a complaint of
>wireless eavesdropping to the FCC, that cooperation exists for the FCC to
>determine if the devices are being used for authorized law enforcement
>activities as per 47CFR2.701 and 15.9.

You have been saying that the FCC investigates criminal
activity, that the FCC will immediately jump right in and is the

primary agency, which should be the first contact for anyone
suspecting criminal use of radios to eavesdrop. All wrong.

You don't seem to have read what the "general practice to
coordinate complaints" is!

The FBI handles *all* such investigations, and the FCC has a
specific, written, agreement with the DOJ to stay out of such
activities until the DOJ (i.e., the FBI) gives them the go ahead
that all criminal investigations are complete.

Clearly the ball is, as I've been saying right from the start,
in the FBI's court. The FCC stays out of it until the FBI is
finished.

>> This is in accordance with a Memorandum of
>> Understanding (MOU) with DOJ (effective since 1953 and
>> revised and re-executed in 1989).
>
>There are literally hundreds of MOUs. You will have to provide a link to the MOU
>to which you refer.

Don't you think testimony of the General Counsel for the FCC is
sufficient to demonstrate that such a document exists or that it
is what he indicates????

At this point you no longer have *any* credibility. You appear
not to have any perspective on law or communications at all. If
you thing your perception of how it all works is more
authoritative that the head lawyer for the FCC, then to put is
quite simply, *nothing* you say can be assumed correct until it
is demonstrated by some means other than just your opinion. I
wouldn't believe you if someone asked you what time of the day
it is unless I could see a clock myself (and then only if the
clock doesn't belong to you).

>> The MOU specifically
>> states that DOJ assumes responsibility for conducting
>> investigations into complaints of alleged criminal violations
>> of Section 705, and the Commission is to provide technical
>> assistance when specifically requested by DOJ. DOJ typically
>> asks us not to investigate until it has conducted its own
>> criminal investigation and has made a prosecutorial
>> determination.
>>
>> Statement of William E. Kennard, General Counsel Federal
>> Communications Commission ... February 5, 1997
>>
>>Nothing in your list of non-sequiturs said anything different
>>than the above.
>
>Again, since the MOU refers to a Section that is not (or is no longer) valid,

>you will need to provide a link.

Keep grasping at straws Frank. By now you have the entire readership of this news group laughing so hard that rolling on the floor doesn't really describe the effect.

The actual text of that MOU is insignificant. The fact that you can't figure out what part of US Code came from Section 705 of the Communications Act does not mean that it is no longer valid (and in fact it is valid).

Just one more example of your inability to logically follow a discussion and reach valid conclusion.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3458. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 11:41:58 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87smrgl9mh.fld@barrow.com>
Source record: 35511

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <ji85cv4e255uvj4501fb41fmra9lusvbt2@4ax.com>, Frank Gilliland
><sparky@NOSPAMaimcomm.net> wrote:
>
>>In <87el31n84k.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>
><snip>
>>> Section 705 of the Communications Act includes criminal
>>> penalties.
>>
>>There is no Section 705; do you mean Section 501?
>
>Correction: Section 705 of the Communications Act = 47 USC 605 (properly cited),
>and like 47 USC 501, provides for imprisonment. But that begs the question: By
>'criminal' do you mean only a violation of the law where the punishment may
>include imprisonment?

What *I* mean, is to show you that the General Counsel for the
FCC (who is the author of that statement, which was clearly
cited in my article), says your assertions regarding criminal
investigation by the FCC are all dead wrong.

Go read it again Frank. Like I said it may take several
readings for a fellow such as you. Let me give you a
prioritized list of what you want to achieve while reading it a
few times. Keep reading it until you get each item, *in order*,
totally within your grasp:

1) It is testimony by the most authoritative source possible.

A) Nobody in their right mind will contradict that statement.

B) You demonstrate that you are not in your right mind each
time you contradict it.

2) It says the FCC does not do criminal investigations regarding
eavesdropping.

A) It says they have not done them since 1953.

B) It says they have a written agreement with the DOJ.

C) It says the DOJ does all criminal investigations
pertaining to electronic eavesdropping.

It would be hugely more beneficial to you (and anyone else who
is interested in the details of how this actually works) if you

would cease and desist from trying to debate something you simply do not have the background or the talent to work out on your own.

Instead, if you would *ask polite questions* about why it is different than you think it should be I will politely explain to you how it does function. I'll attempt to provide examples to demonstrate it and provide cites and references for much more intense research. But this business of you spouting off with nonsense and calling me names and insulting my children just because you can't figure out that 2 plus 2 is 5 only for very very *very* large values of 2, won't get you anywhere.

(Stick around Frank, Usenet will eventually teach you how to do better research *before* you open your yap instead of letting someone else push your foot into your gaping orifice. Right now it appears you've been here only long enough to assume that the pushiest person will "win" the debate. It ain't so...)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3459. AM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 16:06:23 UTC
From: ed_vogel@my-deja.com
Message-ID: <90c699a1.0305150806.68831fe3@posting.google.com>
Source record: 35512

Hi,
I am confused about the principle of mixing a local oscillator
signal with an RF AM signal to remove the CW.

Is the local oscillator phase shifted to cancel the CW?

Or is something more subtle going on here? Please point me to some
radio newbie references.

Thanks much,
Ed Vogel

3460. Re: AM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 16:47:01 UTC
From: mikea@mikea.ath.cx
Message-ID: <ba0ga5aps12@puck.litech.org>
Source record: 35513

Ed Vogel <ed_vogel@my-deja.com> wrote:
> Hi,
> I am confused about the principle of mixing a local oscillator
> signal with an RF AM signal to remove the CW.

> Is the local oscillator phase shifted to cancel the CW?

> Or is something more subtle going on here? Please point me to some
> radio newbie references.

Unless I am (and I may be) much mistaken, the mixing isn't to remove the CW (really, to recover the audio), but to get the modulated signal down to a fixed frequency (the IF) where it can be dealt with more easily.

Then (typically) the envelope detector rectifies the signal and a low-pass filter chops off everything above the audio, recovering the audio from the rectified audio+IF.

Unless, as I said, I'm much mistaken.

If you're mathematically inclined (I am; degree in Math, and I do computer science for a living), a good link is

<http://www.ee.byu.edu/ee/class/ee444/ComBook/ComBook/node77.html>

Another is

<http://www.alynk.com/usr/gasperi/theory.htm>

A typical envelope detector is shown here:

<http://engineering.rowan.edu/~shreek/spring02/ecomms/lab3.html>

along with some other stuff that appears to be useful.

--
[T]he rules of rugby. There is only one rule. `Skip it by any means necessary'.
Nix, in the Scary Devil Monastery

3461. Re: AM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 17:32:03 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ba0iun$db5$1@slb3.atl.mindspring.net>
Source record: 35514

Ed Vogel <ed_vogel@my-deja.com> wrote:
> Hi,
> I am confused about the principle of mixing a local
> oscillator signal with an RF AM signal to remove the CW.

> Is the local oscillator phase shifted to cancel the CW?

> Or is something more subtle going on here? Please point
> me to some radio newbie references.

I think you may be thinking of the AM detection system known as
Synchronous Detection.

The idea is to introduce a signal in phase with the carrier and THEN feed
it into a detector. This removes the problem of signal fading causing the
carrier level to fall below the detector threshold.

The result is less distortion of the audio when there is a lot of signal
fade due to multipath and so on.

There are several methods used to create the fixed signal in phase with
the carrier, but a web search for 'synchronous detector' ought to find
interesting web sites.

Jim Pennell
N6BIU

3462. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 20:23:47 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <not7cv87qm765at470fvqmqq10boqtt8el@4ax.com>
Source record: 35517

In <87wugslak4.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

<snip>
>Don't you think testimony of the General Counsel for the FCC is
>sufficient to demonstrate that such a document exists or that it
>is what he indicates????

Where's the link?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3463. a almost-broken Standard C-58

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 21:24:20 UTC
From: Claudio Girardi <please@no.spam>
Message-ID: <3EC40584.E91BD61@no.spam>
Source record: 35516
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hallo,
I have a Standard C-58 that has some problem, probably with the microprocessor (TMS1300); when I leave it powered, after some time it doesn'respond to the knob or to any button. I have to leave it unpowered for some hour to return to the normal functioning. Has anyone tried to understand if it is possible to change the microprocessor with some PIC ? Could it be possible ?

Thanks,

Claudio

3464. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-15 23:00:27 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87d6ijhl2s.fld@barrow.com>
Source record: 35518

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87wugslak4.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>
><snip>
>>Don't you think testimony of the General Counsel for the FCC is
>>sufficient to demonstrate that such a document exists or that it
>>is what he indicates????
>
>Where's the link?

http://www.google.com

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3465. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 01:34:37 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <ilf8cvssg1sjp6avfj4u7rqk8efn4laeeh@4ax.com>
Source record: 35515

On Sun, 11 May 2003 15:12:18 -0500, Bob Liesenfeld <wb0poq@visi.com>
wrote:

>
>
>Bob Liesenfeld wrote:
>>
>> Howdy folks,
>> In the past I have used permanent magic marker to draw tracks on a
>> board, but have never been satisfied with the durability of this ink
>> under enchant.
>>
>
> Thanks for all the replies. I could not find the Lumocolor pens
>locally, but did try a Sharpie "Industrial" permanent marker with good
>results.

The double-ended ones? Staples sell 'em over here in the UK via mail
order. I tried a few more today out of curiosity and found very good
results from a Stabilo OH pen (universal/permanet) roller-ball marker
with a fine tip that's specified to work well on glass, metal, film
etc. It gave excellent sub-milimetre lines and the marks held up
perfectly well under ferric chloride. Only just over a quid and
refillable, too. Hard to beat, I'd say. I notice no one here's
recommended the Decon/Dalo types...

3466. WTB Oval PrimeStar dish

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 06:00:55 UTC
From: Bob - K6ZLY <Bob_member@newsguy.com>
Message-ID: <ba1uqn013e7@drn.newsguy.com>
Source record: 35519

I am looking for an oval PrimeStar dish to experiment with. No feed needed, just the dish. Tnx ... Bob K6ZLY r.wold@attbi.com

3467. midland 70-052-c

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 08:40:55 UTC
From: Bruce Summers <k8ibe@chartermi.net>
Message-ID: <3EC4A417.62F1B5C7@chartermi.net>
Source record: 35520

I'm looking for info on the conversion of this radio to 6 meters.

3468. Re: 80m am homebrew transceiver circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 10:41:12 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3ec4c0e2@news.alphalink.com.au>
Source record: 35521

"John R. Strohm" <strohm@airmail.net> wrote in message
news:B4F1F079DFB507B8.3FA446391A34BAF1.1B4A0D486A40B1B2@lp.airnews.net...
> "rfload" <rfload@yahoo.com> wrote in message
> news:b99ni7$1rl$1@newshost.mot.com...
> > Anybody know where to find 80m am transceiver circuit?
>
> I don't think I've EVER seen an Ancient Modulation transceiver circuit for
> 80m. I've seen a few DSB circuits: here's one
> http://www.qrp.pops.net/willy.htm.

I'd go DSB rather than AM. Unless you're running high power and have a full
sized antenna,
AM on 80m is a dead loss due to phase distortion and inefficiency. Also
achieving good
AM modulation can be VERY hard, especially with solid state.

DSB sounds just like SSB, is more efficient, better for portable use and
will give you more
contacts, especially with SSB stations.

Peter

3469. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 10:49:44 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <t3e9cv4t7pgjgk44k1srk666qtdl4foiej@4ax.com>
Source record: 35522

In <87smrgl9mh.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>In <ji85cv4e255uvj4501fb41fmra9lusvbt2@4ax.com>, Frank Gilliland
>><sparky@NOSPAMaimcomm.net> wrote:
>>
>>>In <87el31n84k.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>>
>><snip>
>>>> Section 705 of the Communications Act includes criminal
>>>> penalties.
>>>
>>>There is no Section 705; do you mean Section 501?
>>
>>Correction: Section 705 of the Communications Act = 47 USC 605 (properly cited),
>>and like 47 USC 501, provides for imprisonment. But that begs the question: By
>>'criminal' do you mean only a violation of the law where the punishment may
>>include imprisonment?
>
>What *I* mean, is to show you that the General Counsel for the
>FCC (who is the author of that statement, which was clearly
>cited in my article), says your assertions regarding criminal
>investigation by the FCC are all dead wrong.
<snip>

Really?

How do you explain this?: http://www.fcc.gov/eb/tpsd/ulo.html You can't.

How do you explain why your article and the referred MOU (both of which you have yet to provide a link) were ignored in the two cases of suspected wireless eavesdropping that I observed first-hand? You can't.

How do you explain why there isn't any CFR, USC, MOU, or any other authoritative legal source which declares, as you declared early in this discussion, that "the devices being legal is irrelevant"? You can't.

Floyd, it is your ASSERTIONS that are "all dead wrong" -- the facts speak for themselves.

<snip>
>(Stick around Frank, Usenet will eventually teach you how to do
>better research *before* you open your yap instead of letting
>someone else push your foot into your gaping orifice. Right
>now it appears you've been here only long enough to assume that
>the pushiest person will "win" the debate. It ain't so...)

This wasn't a competition until you made it one, and now you have lost. If there is anything I learned from this exchange is that you get real upset when someone challenges your self-proclaimed status as the smartest person in the room.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3470. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 13:32:40 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87smrfvwxz.fld@barrow.com>
Source record: 35523

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87smrgl9mh.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>
>>What *I* mean, is to show you that the General Counsel for the
>>FCC (who is the author of that statement, which was clearly
>>cited in my article), says your assertions regarding criminal
>>investigation by the FCC are all dead wrong.
><snip>
>
>Really?

Really! Here, lets go through this one more time... I'll even slice it
a little different so that you can find the answers to your irrelevant
nits.

"Good morning, Mr. Chairman and Members of the Subcommittee.
Thank you for the opportunity to testify on behalf of the
Federal Communications Commission..."

"Under Section 705 the Communications Act (47 U.S.C. '605), the ..."

"Section 705 of the Communications Act includes criminal
penalties. Accordingly, and in light of its close
relationship to the wiretapping and related provisions of
the criminal code, and at the request of the Department of
Justice (DOJ), it is the FCC's longstanding general practice
to coordinate complaints regarding potential violations of
section 705 with DOJ in order to make sure that our
administrative actions do not interfere with any DOJ
criminal investigation. ..."

William E. Kennard, General Counsel
Federal Communications Commission, Feb. 5, 1997

>How do you explain this?: http://www.fcc.gov/eb/tpsd/ulo.html You can't.

Another non-sequitur.

That is a list of actions taken solely for operating without a
license. None of them involve eavesdropping. And you failed to
notice that all criminal cases were handled by the US Department
of Justice (various Assistant District Attorneys).

>How do you explain why your article and the referred MOU (both of which you have
>yet to provide a link) were ignored in the two cases of suspected wireless
>eavesdropping that I observed first-hand? You can't.

I can easily. You haven't got a clue what happened, and
couldn't describe it logically or accurate if they handed it to
you on a plate.

Your *total* evidence is the statement "two cases ... I observed".

You've not been able to observe anything else related to this
topic and get it right, so I'm not yet ready to stipulate that
the above claim is less bogus that your other claims have been.

>How do you explain why there isn't any CFR, USC, MOU, or any other authoritative
>legal source which declares, as you declared early in this discussion, that "the
>devices being legal is irrelevant"? You can't.

Lacking a document that says there are not relevant is
insignificant, and another non-sequitur.

What *is* logically significant is that you have no document that says
the *are* related.

The simple fact is that the legality of electronic eavesdropping
does not depend on whether the electronic equipment is properly
licensed or not. If the eavesdropping is legal, it will still
be legal if the equipment is found to be improperly licensed.
The operator might be censured for unlicensed operation, but not
"unlicensed eavesdropping".

The two are not connected. The devices being legal is
irrelevant to whether the eavesdropping is legal.

How many times do you need that explained. If you think it is otherwise,
please cite the law which makes it so. Lacking such law... it is
irrelevant.

>Floyd, it is your ASSERTIONS that are "all dead wrong" -- the facts speak for
>themselves.

The facts do speak. As the FCC's General Counsel says, they let
the Department of Justice investigate criminal eavesdropping and
do not get involved except at the specific invitation of the DOJ
or until the DOJ says they have finished their investigation.
That is *clearly* stated by the most authoritative source
possible. Yet you want to argue whether it is true or not...

And you even have the brass to claim that the Cornell School of
Law doesn't know how to cite US Code, that Section 705 of the
Communications Act has been repealed, that you won't believe
what the FCC's General Counsel says is in a written agreement
between the FCC and the DOJ unless you see a copy of it, and
I've forgotten how many other lulus there were.

><snip>
>>(Stick around Frank, Usenet will eventually teach you how to do
>>better research *before* you open your yap instead of letting
>>someone else push your foot into your gaping orifice. Right

>>now it appears you've been here only long enough to assume that
>>the pushiest person will "win" the debate. It ain't so...)
>
>This wasn't a competition until you made it one, and now you have lost. If there
>is anything I learned from this exchange is that you get real upset when someone
>challenges your self-proclaimed status as the smartest person in the room.

You are claiming that what *you* have observed the FCC do is the
definition of their methods of operation. That is a
"self-proclaimed status" Frank.

What I did was go find the most authoritative source available
to demonstrate that what you observed just simply wasn't what
you think it was.

(Have you figured out how to locate it on google yet? Try
searching the web for an exact phrase, and choose some part of
what I've quoted. Make it long enough and unique, and you'll no
doubt find exactly the same source that I got my copy from. I'd
give you a URL, but the only way I can get it is to do that
myself, and I see no reason you can't learn _something_ no
matter how hard you try avoiding it.)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3471. Re: WTB Oval PrimeStar dish

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 13:44:00 UTC
From: Chuck / KE4ETH <chuck_hawks@hotmail.com>
Message-ID: <Gaaxa.40379$dc5.12856@fe09.atl2.webusenet.com>
Source record: 35524

Bob,
Most people around here give them away for the asking. I got mine and use it for K-Band radio. The feed is H/V polarization. You might see one and ask if you can have it. That worked for me. YMMV

"Bob - K6ZLY" <Bob_member@newsguy.com> wrote in message news:ba1uqn013e7@drn.newsguy.com...
> I am looking for an oval PrimeStar dish to experiment with. No feed needed,
> just the dish. Tnx ... Bob K6ZLY r.wold@attbi.com
>

3472. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 21:10:14 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <ttfacv8j03ckvsbmma3k043ue9nrse4phm@4ax.com>
Source record: 35525

In <87smrfvwxz.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:

>Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>>In <87smrgl9mh.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>>>
>>>What *I* mean, is to show you that the General Counsel for the
>>>FCC (who is the author of that statement, which was clearly
>>>cited in my article), says your assertions regarding criminal
>>>investigation by the FCC are all dead wrong.
>><snip>
>>
>>Really?
>
>Really! Here, lets go through this one more time... I'll even slice it
>a little different so that you can find the answers to your irrelevant
>nits.
>
> "Good morning, Mr. Chairman and Members of the Subcommittee.
> Thank you for the opportunity to testify on behalf of the
> Federal Communications Commission..."
>
> "Under Section 705 the Communications Act (47 U.S.C. '605), the ..."
>
> "Section 705 of the Communications Act includes criminal
> penalties. Accordingly, and in light of its close
> relationship to the wiretapping and related provisions of
> the criminal code, and at the request of the Department of
> Justice (DOJ), it is the FCC's longstanding general practice
> to coordinate complaints regarding potential violations of
> section 705 with DOJ in order to make sure that our
> administrative actions do not interfere with any DOJ
> criminal investigation. ..."
>
> William E. Kennard, General Counsel
> Federal Communications Commission, Feb. 5, 1997

For the third time, where's the link?

>>How do you explain this?: http://www.fcc.gov/eb/tpsd/ulo.html You can't.
>
>Another non-sequitur.
>
>That is a list of actions taken solely for operating without a
>license. None of them involve eavesdropping.

You were trying to tell me that the FCC doesn't investigate criminal matters,
but this proves you wrong (from the Flippo case):

"The Federal Communications Commission today announced that an investigation by
its Enforcement Bureau..."

It is therefore VERY relevant.

> And you failed to
>notice that all criminal cases were handled by the US Department
>of Justice (various Assistant District Attorneys).

The Flippo case was handled in a US District Court (as per FCC regs), and was
prosecuted by the US Attorney's Office for that district. That's NOT the FBI, as
per your claims that the agency performs all criminal investigations and
proceedings for the FCC. As I just proved, they don't.

>>How do you explain why your article and the referred MOU (both of which you have
>>yet to provide a link) were ignored in the two cases of suspected wireless
>>eavesdropping that I observed first-hand? You can't.
>
>I can easily. You haven't got a clue what happened, and
>couldn't describe it logically or accurate if they handed it to
>you on a plate.
>
>Your *total* evidence is the statement "two cases ... I observed".
>
>You've not been able to observe anything else related to this
>topic and get it right, so I'm not yet ready to stipulate that
>the above claim is less bogus that your other claims have been.

Two paragraphs of ad hominem is not an explanation.

>>How do you explain why there isn't any CFR, USC, MOU, or any other authoritative
>>legal source which declares, as you declared early in this discussion, that "the
>>devices being legal is irrelevant"? You can't.
>
>Lacking a document that says there are not relevant is
>insignificant, and another non-sequitur.
>
>What *is* logically significant is that you have no document that says
>the *are* related.

Unbelievable. Are you trying to say that 47CFR 2.701 and 15.9 have no relevance?

>The simple fact is that the legality of electronic eavesdropping
>does not depend on whether the electronic equipment is properly
>licensed or not. If the eavesdropping is legal, it will still
>be legal if the equipment is found to be improperly licensed.
>The operator might be censured for unlicensed operation, but not
>"unlicensed eavesdropping".
>
>The two are not connected. The devices being legal is
>irrelevant to whether the eavesdropping is legal.

WRONG! The FCC and FBI (and other LEAs) have been battling out that issue for years, with the FCC winning every time. The most recent tiff is their dispute with the implementation of CALEA. In fact, there is a case right here in Spokane that's getting some attention because the defense is claiming that a GPS tracking device was illegal DESPITE a legal warrant authorizing the device.

>How many times do you need that explained. If you think it is otherwise,
>please cite the law which makes it so. Lacking such law... it is
>irrelevant.

I have cited the relevant law many times.

>>Floyd, it is your ASSERTIONS that are "all dead wrong" -- the facts speak for
>>themselves.
>
>The facts do speak. As the FCC's General Counsel says...
<snip>

Where's the link?

>And you even have the brass to claim that the Cornell School of
>Law doesn't know how to cite US Code,

I claimed that YOU didn't know how to cite law. Quit spinning.

> that Section 705 of the
>Communications Act has been repealed,

I never said it was repealed, I said it didn't exist because I was looking at the USC, a mistake which I also corrected. More spin.

> that you won't believe
>what the FCC's General Counsel says is in a written agreement
>between the FCC and the DOJ unless you see a copy of it,

I didn't say that I won't believe it, I just want to read the statement in its entirety, and the MOU to which it refers. Your refusal to provide a link leads me to think that you are hiding something -- perhaps the missing context of both those references will render your point irrelevant. Where's the link?

> and
>I've forgotten how many other lulus there were.
>
>><snip>
>>>(Stick around Frank, Usenet will eventually teach you how to do
>>>better research *before* you open your yap instead of letting
>>>someone else push your foot into your gaping orifice. Right
>>>now it appears you've been here only long enough to assume that
>>>the pushiest person will "win" the debate. It ain't so...)
>>
>>This wasn't a competition until you made it one, and now you have lost. If there
>>is anything I learned from this exchange is that you get real upset when someone
>>challenges your self-proclaimed status as the smartest person in the room.
>
>You are claiming that what *you* have observed the FCC do is the

>definition of their methods of operation. That is a
>"self-proclaimed status" Frank.

That is an observation of practiced procedure, Floyd, and it conflicts with your quote and MOU (BTW, where's the link?).

>What I did was go find the most authoritative source available
>to demonstrate that what you observed just simply wasn't what
>you think it was.

Where's the link?

>(Have you figured out how to locate it on google yet? Try
>searching the web for an exact phrase, and choose some part of
>what I've quoted. Make it long enough and unique, and you'll no
>doubt find exactly the same source that I got my copy from. I'd
>give you a URL, but the only way I can get it is to do that
>myself, and I see no reason you can't learn _something_ no
>matter how hard you try avoiding it.)

Just as I suspected...

http://www.house.gov/commerce/telecom/hearings/020597/kennard.pdf

Kennard's statement was about the use of scanners to intercept and divulge cellular telephone communications. This is entirely consistent with Section 705 which (if you had actually read it) prohibits the improper use of intercepted communications, but NOT the act of intercepting those communications. The acts of eavesdropping, wiretapping, etc. are prohibited elsewhere, and have already been cited. IOW, your quote is "non-sequitur".

BTW, the specific MOU is not cited in the statement. Maybe you can come up with a link for that MOU, or maybe for an MOU with a similar FCC/FBI agreement for violations of Section 301 or 501, which would be relevant to this discussion.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3473. Re: midland 70-052-c

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-16 22:11:52 UTC
From: Andy Brinkley <andy@brinkleyelectronics.com>
Message-ID: <lmdxa.56027$5M.3390758@twister.southeast.rr.com>
Source record: 35526

"Bruce Summers" <k8ibe@chartermi.net> wrote in message
news:3EC4A417.62F1B5C7@chartermi.net...
> I'm looking for info on the conversion of this radio to 6 meters.

Bruce -

Requires reprogramming to the new freqs, tuning of the VCO's and realignment
of the RX and TX stages.

No component changes needed.

E-mail me direct if you need further, I have set a bunch up on 6 meters.

Andy

NC Certified Firefighter III / Instructor II / EMT-A
FCC Licensed Technician / Amateur Call NC4AB
http://www.brinkleyelectronics.com

3474. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-17 01:54:28 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znlmuyln.fld@barrow.com>
Source record: 35527

Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>In <87smrfvwxz.fld@barrow.com>, Floyd Davidson <floyd@ptialaska.net> wrote:
>> William E. Kennard, General Counsel
>> Federal Communications Commission, Feb. 5, 1997
>
>For the third time, where's the link?

If I had to do all of your research for you Frank, you would have
to pay me quite well. I'm sorry that was so hard for you to find,
but it _was_ about time you learned how to use google.

>You were trying to tell me that the FCC doesn't investigate criminal matters,

I said they don't investigate criminal matters involving
electronic eavesdropping. I said they do investigate matters
involving the administration of CFRs, and that includes criminal
non-compliance with FCC orders relating to that administration.

(This may be hard for you to understand, but if the FCC thinks
you are illegally using electronics eavesdropping they will not
investigate. They'll leave that to the FBI. But if the FBI
tells them that you are using an unlicensed radio device to
eavesdrop, the FCC might well order you to cease using it...
and if you don't stop using it they might investigate not the
illegal eavesdropping, but the criminal refusal to obey a lawful
order from the FCC!)

>but this proves you wrong (from the Flippo case):
>
>"The Federal Communications Commission today announced that an investigation by
>its Enforcement Bureau..."
>
>It is therefore VERY relevant.

Of a criminal failure to comply with direct FCC orders, not for
criminal electronic eavesdropping. It is totally irrelevant.

Your insistence otherwise is one more example of how you are
unable to relate the various jurisdictions and procedures, which
is exactly the reason your observations of FCC actions are
invalid as evidence of what is appropriate response to
suspected criminal electronic eavesdropping.

>>Your *total* evidence is the statement "two cases ... I observed".
>>
>>You've not been able to observe anything else related to this
>>topic and get it right, so I'm not yet ready to stipulate that

>>the above claim is less bogus that your other claims have been.
>
>Two paragraphs of ad hominem is not an explanation.

"Two cases ... I observed" is not evidence. The above is also
not Ad Hominem, it is a *valid* description of how you have
handled this thread.

>>The simple fact is that the legality of electronic eavesdropping
>>does not depend on whether the electronic equipment is properly
>>licensed or not. If the eavesdropping is legal, it will still
>>be legal if the equipment is found to be improperly licensed.
>>The operator might be censured for unlicensed operation, but not
>>"unlicensed eavesdropping".
>>
>>The two are not connected. The devices being legal is
>>irrelevant to whether the eavesdropping is legal.
>
>WRONG! The FCC and FBI (and other LEAs) have been battling out that issue for
>years, with the FCC winning every time. The most recent tiff is their dispute
>with the implementation of CALEA. In fact, there is a case right here in Spokane
>that's getting some attention because the defense is claiming that a GPS
>tracking device was illegal DESPITE a legal warrant authorizing the device.

You aren't making any sense at all. If your are talking about
rules of evidence, that is not a claim that it is "illegal" in
the sense of criminally liable. Illegal would mean they want to
charge the person with a crime for eavesdropping with an
unlicensed device. I don't think so... ;-)

>>How many times do you need that explained. If you think it is otherwise,
>>please cite the law which makes it so. Lacking such law... it is
>>irrelevant.
>
>I have cited the relevant law many times.

You have not. Assertions that unrelated laws apply are not
making your case.

>>Law doesn't know how to cite US Code,
>
>I claimed that YOU didn't know how to cite law. Quit spinning.

You said the material I quoted contained an invalid cite. That
cite was from the material published by the Cornell School of
Law. You couldn't even figure out that it wasn't me that said
it. You later made the same arguments about other text that was
just as clearly quoted from properly cited sources.

>> that Section 705 of the
>>Communications Act has been repealed,
>
>I never said it was repealed, I said it didn't exist because I was looking at

>the USC, a mistake which I also corrected. More spin.

You claimed it was "no longer valid"; does that mean "repealed"
to you?

>> that you won't believe
>>what the FCC's General Counsel says is in a written agreement
>>between the FCC and the DOJ unless you see a copy of it,
>
>I didn't say that I won't believe it, I just want to read the statement in its
>entirety, and the MOU to which it refers. Your refusal to provide a link leads
>me to think that you are hiding something -- perhaps the missing context of both
>those references will render your point irrelevant. Where's the link?

I'm hiding the fact that I do have other things to do in life
besides spoof feed someone who refuses to understand half of it
anyway. YOU CAN DO YOUR OWN RESEARCH!

>>You are claiming that what *you* have observed the FCC do is the
>>definition of their methods of operation. That is a
>>"self-proclaimed status" Frank.
>
>That is an observation of practiced procedure, Floyd, and it conflicts with your
>quote and MOU (BTW, where's the link?).

Well, see! That is exactly what I pointed out Frank, and here
you are openly admitting it: You have the audacity to claim you
are the authority, by virtue of your eye witness observations,
on what the FCC's legal procedures are.

This comes from the same person who can't seem to relate an
Act of Congress to the US Code to the CFR's that the FCC administers,
and hasn't demonstrated any ability to logically analyze anything
related to those procedures.

But you want to proclaim yourself more authoritative than the
General Counsel of the Federal Communications Commission.

I *AM* impressed!

>Just as I suspected...
>
>http://www.house.gov/commerce/telecom/hearings/020597/kennard.pdf
>
>Kennard's statement was about the use of scanners to intercept and divulge
>cellular telephone communications. This is entirely consistent with Section 705

Exactly. That is called "electronic eavesdropping", and he
explained to the House Sub-committee the relationship between
illegal eavesdropping and that which is not.

Apparently you didn't understand it.

I told you to start with that you'd need to read it several
times. Do you want me to quote you that section one more time,
or can you continue to look it up on your own now?

>which (if you had actually read it) prohibits the improper use of intercepted
>communications, but NOT the act of intercepting those communications. The acts
>of eavesdropping, wiretapping, etc. are prohibited elsewhere, and have already
>been cited. IOW, your quote is "non-sequitur".

Maybe you'd best read it all again. It is a fact that
interception as such is *not* illegal.

>BTW, the specific MOU is not cited in the statement. Maybe you can come up with
>a link for that MOU, or maybe for an MOU with a similar FCC/FBI agreement for
>violations of Section 301 or 501, which would be relevant to this discussion.

There you go again... The MOU is not cited and you don't have a
copy of it to verify that the General Counsel for the FCC in
sworn testimony to the Congress of the United States is telling
the truth. OH MY GOODNESS, what will we do until Frank hisself
can verify it for us???

What a joke.

(I'll take Kennard's word for it over yours every time.)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3475. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-17 02:02:07 UTC
From: mikea@mikea.ath.cx
Message-ID: <ba456v$t32$1@puck.litech.org>
Source record: 35528

Floyd Davidson <floyd@ptialaska.net> wrote:
> Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:

Would you two gentlemen please consider taking it to E-mail?

I don't see a lot of participation by others, and I think it is
reasonable to view that as indicating not much interest on the
opart of others.

Thanks.

--
Mike Andrews
mikea@mikea.ath.cx
Tired old sysadmin since 1964

3476. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-17 02:19:55 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87ptmiuxf8.fld@barrow.com>
Source record: 35529

mikea@mikea.ath.cx (Mike Andrews) wrote:
>Floyd Davidson <floyd@ptialaska.net> wrote:
>> Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
>
>Would you two gentlemen please consider taking it to E-mail?
>
>I don't see a lot of participation by others, and I think it is
>reasonable to view that as indicating not much interest on the
>opart of others.
>
>Thanks.

Mike you are invited to not read anything which does not
interest you. I don't see either Frank or myself forcing you to
read it.

It does happen that I'm getting email which suggests that there
are people reading it; though that is *not* a requirement for a
thread to continue anyway.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3477. Boonton 92b 92AD RF level meters service manual, schematics, calibration ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-17 09:37:26 UTC
From: Jemp <satbimbo@pandora.be>
Message-ID: <qpnxa.5921$1u5.465@afrodite.telenet-ops.be>
Source record: 35530

Hi

does anybody have the service manual for Boonton 92b or 92AD

Just a electronics diagram can be satisfying

or the calibration hints for the 92AD

Ps reply direct mail

Jemp

3478. Re: MY OFFICE IS BUGGED! HELP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-17 19:17:22 UTC
From: mikea@mikea.ath.cx
Message-ID: <ba61s1$s0n$2@puck.litech.org>
Source record: 35531

Floyd Davidson <floyd@ptialaska.net> wrote:
> mikea@mikea.ath.cx (Mike Andrews) wrote:
> >Floyd Davidson <floyd@ptialaska.net> wrote:
> >> Frank Gilliland <sparky@NOSPAMaimcomm.net> wrote:
> >
> >Would you two gentlemen please consider taking it to E-mail?
> >
> >I don't see a lot of participation by others, and I think it is
> >reasonable to view that as indicating not much interest on the
> >opart of others.
> >
> >Thanks.

> Mike you are invited to not read anything which does not
> interest you. I don't see either Frank or myself forcing you to
> read it.

> It does happen that I'm getting email which suggests that there
> are people reading it; though that is *not* a requirement for a
> thread to continue anyway.

I see. "The lurkers support me in E-mail", eh? That's an old line in the network management newsgroups and mailing lists, and is generally regarded to be a sign that the writer's eyes are brown.

You're the first person in this newsgroup to make my killfile. I hope you're the last.

--
Mike Andrews
mikea@mikea.ath.cx
Tired old sysadmin since 1964

3479. Help with id potted choke, transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-18 23:15:25 UTC
From: Robert Mozeleski <moz@ncx.com>
Message-ID: <vcg883gq22eo44@corp.supernews.com>
Source record: 35534
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.homebrew

I need help id'ing these chokes and transformers i picked up today at the local flea mart.
http://userweb.ncx.com/moz/choke.jpg
(120k jpg file). Markings on the transformer are WHEELER K-54J757-2 120V 60CPS 750VCT
220MA. Rather huge transformer with two
large porcelain top caps soldered on. 6 1/2" x 6" x 4 3/4". Might have been part of a
homebrew setup, but i am wondering if
anybody knows the original usage. Markings on the chokes are ACME ELECTRIC NQ-T-151 L-301.
Measures about 1/2 ohm, can't
measure inductance until i bring it to work. Last is a transformer? Seems to have multiple
primaries and or secondaries. And help
is appreciated.

3480. Spacing for open wire insulators?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-18 23:40:36 UTC
From: k9sqg@aol.com
Message-ID: <20030518194036.09428.00000267@mb-m13.aol.com>
Source record: 35532

None of my antenna books address the issue of spacing between insulators for open wire line. I'm looking for people's experiences, especially with 2" spreaders.

Thanks,

Evan

3481. SFRE1057 fet? identificaion

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-18 23:46:48 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1053301611.46800@auth2.dns.griffin.net.uk>
Source record: 35533

can anyone help with the specs of above..i expect its a 28v fet (rf) but need to know more..i know its a special made by motorola for???

thanks simon g0zen

3482. Re: HI-POT TESTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 01:17:28 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <nRWxa.100$Pw6.60019@newsfep1-win.server.ntli.net>
Source record: 35535

You could use the HV supply from a _small_ TV set, with a long string of extra resistors on the HV output so
> you don't get too much output current. Just an idea... It's not a precise 15kV, but nevertheless should be
> 10kV .. 20kV or thereabouts.
==========
Indeed a HV supply from a TV set or video monitor would do the trick
Some time ago I was lucky to find a HIPOT tester make Danbridge at a surplus store (for equiv US $ 30) . It has such a HV power supply . Breakdown tests can be done at 1 - 10 and 100 microamps , adjustable Voltage Ranges : 3 - 10 and 30 kV
There was no HV cable/probe ,but I managed to make one with a banana plug and a length of HV cable as used in TV sets.
Recently I obtained some spark plug cable (the old fashioned type with a multistrand copper conductor) which I also will try.

Frank gm0csz.kn6wh@ntlworld.com

3483. Re: ½" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 01:32:20 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <oRWxa.101$Pw6.60019@newsfep1-win.server.ntli.net>
Source record: 35536
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

> Wanted:
> Half inch diameter ferrite rods. Must be at least six inches long.
> Willing to pay good money. I'm in Sheffield, UK. Please telephone
> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.
==========
Try Mainline Electronics in Leicester - UK . They also have a surplus dept.
sales@mainlinegroup.co.uk

Frank GM0CSZ

3484. Re: Spacing for open wire insulators?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 01:41:44 UTC
From: Dan Richardson <ChangeThisToCallSign@mendolink.com>
Message-ID: <cedgcvseseec5im5g4h7vbeppke91s7k5u@4ax.com>
Source record: 35537

On 18 May 2003 23:40:36 GMT, k9sqg@aol.com (K9SQG) wrote:

>None of my antenna books address the issue of spacing between insulators for
>open wire line. I'm looking for people's experiences, especially with 2"
>spreaders.
>
>Thanks,
>
>Evan

I am using open line with two inch spacing. I have placed my spreaders
at about 12 inch intervals and that seems to hold everything about
right.

Danny, K6MHE

3485. WB8RCR Panel Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 15:59:38 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3EC8FF69.C9404E76@ispwest.com>
Source record: 35538

I am using this great program but my very limited knowledge of the PostScript language doesn't permit me to do any but the most primitive panels. I would greatly appreciate receiving any sample text files of panels you guys may have put together and would like to share .....

Thanks

Ted in Atlanta KD4EE

gamach1@ispwest.com

3486. solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 17:00:06 UTC
From: Roln <roln@yahoo.com>
Message-ID: <q48ya.185429$pa5.183617@rwcrnsc52.ops.asp.att.net>
Source record: 35539

Howdy!

Curious if anyone has built the solid state amplifer that RF Parts sells.
I ordered all the components and now I'm ready to start assembling. I did
not a order heat sink....I'm hoping I can find something locally that will
work....for less money.
Anyone here using a home-brew solid state amp?

Roln

3487. Re: Orchid boarding houses

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 20:39:05 UTC
From: Larry Dighera <LDighera@att.net>
Message-ID: <0tifcvg9hf2hd7ddi4mpbpvav7qgb086l3@4ax.com>
Source record: 35540
Cross-posted to: rec.gardens.orchids,sci.electronics.basics,rec.radio.amateur.homebrew

On Thu, 15 May 2003 00:16:07 -0400, "Ted Byers"
<r.ted.byers@sympatico.ca> wrote:

> While I can get a computer to do literally
>anything I want, just by writing a program to do it

You can't get a computer to SUCCESSFULLY divide by zero. :-)

>(I can even get a computer to exhibit behaviours as complex as those of almost
>any animal; a fact which raises countless interesting philosophical questions we probably
>should avoid in this forum),

That would be an interesting topic of discussion.

>I would likely be quite dangerous trying to put together a circuit of any kind.

It's not as difficult as you fear.

>Or maybe it is a question of simply never having done it before. Do you know
>of any good reference books which would show me how?

These authors can make learning the fundamentals of electronic
circuits painless:

Don Lancaster
Cmos Cookbook
http://www.amazon.com/exec/obidos/tg/detail/-/0750699434/qid=1053373158/sr=1-1/ref=sr_1_1/002-5846201-3696862?v=glance&s=books

Forrest Mims
The Beginner's Handbook of Electronics
http://www.amazon.com/exec/obidos/search-handle-url/index=books&field-author=Mims%2C%20Forrest%20M./002-5846201-3696862

>I can read, and follow instructions accompanied by diagrams,
>so maybe there is hope ...

You might also cultivate an amateur radio buddy as a consultant to
bounce your ideas/needs off of.

Radio Amateurs of Canada: http://www.rac.ca/

The American Radio Relay League: http://www.arrl.org/
The ARRL publishes The ARRL Handbook for Radio Amateurs which contains
basic electronics theory introductory chapters:
http://www.arrl.org/catalog/?item=1891

These folks are talented, and usually willing to assist with
interesting projects.

You can order small quantities of electronic parts from Digi-Key
Corporation:
http://www.digikey.com/
http://www.digikey.com/Scripts/US/DKSUS.dll?KeyWordSearch

I'll cross-post this article to some of these newsgroups, and perhaps
we'll get some additional help in getting you started in electronic
circuit design:

sci.electronics.basics,sci.electronics.design,rec.radio.amateur.homebrew

3488. Re: 50A1 tube for receiver. "reasonable" please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 20:42:27 UTC
From: Skipp says thanks <nahnahheyheybythesteam@yahoo.com>
Message-ID: <babfjj$ks2$4@woodrow.ucdavis.edu>
Source record: 35541
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.swap

Thank you very much max...
cheers
skipp

: In rec.radio.amateur.homebrew Max <Max_Jens@post9.tele.dk.invalid>
: wrote:
: Hello Skipp

:> I've also read about solid state replacements for the 50A1. If you can
:> provide me a refernce article on the web, I'll just make him one. I hate
:> to reinvent the wheel.

: You can buy a solid state replacement for 17$ at
: http://www.tubesandmore.com/

: Regards Max

3489. ISO Azden Mike Info & Wilson Rotor Connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 20:47:47 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <vcigr4l7pll7ad@corp.supernews.com>
Source record: 35542
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,alt.radio.amateur

Greetings all I am in need of Microphone information on a Azden PRS-400. I just acquired a unit and it was without a microphone. If anybody out there has a microphone that will serve and/or a schematic or manual I would be grateful. Gladly pay any costs incurred.

I am also trying to locate a connector for the Wilson WRY-500 Antenna Rotor. I need the outside 8-Pin female connector that looks like a Cannon connector. If anybody has one that will work or could point me to a source, that too would make me grateful. Please respond to my email address. Thanks Don Smith KB6GQA

3490. ISO Couple of MT-8860 and MT-8865 IC's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 21:01:47 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <vcihi6ap70f8e4@corp.supernews.com>
Source record: 35543
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,alt.radio.amateur

I am searching for a couple of the DTMF IC's used in a Comm Spec Repeater Controller. They are Mitel MT-8860 and MT-8865. Could use a couple of each or any other replacement IC's that would work. Please respond to my email account. Thanks Don Smith KB6GQA

3491. Re: ISO Azden Mike Info & Wilson Rotor Connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 21:01:57 UTC
From: kludge@panix.com
Message-ID: <babgo5$b4n$1@panix2.panix.com>
Source record: 35544
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,alt.radio.amateur

Don Smith <desmith@innercite.com> wrote:
>Greetings all I am in need of Microphone information on a Azden PRS-400.
>I just acquired a unit and it was without a microphone. If anybody out
>there has a microphone that will serve and/or a schematic or manual I would
>be grateful. Gladly pay any costs incurred.

Basically, you can't mix and match those things. You're stuck basically trying to find someone who has kept the exact model microphone with the exact frequency (unless you want to recrystal). I see receivers at hamfests all the time but nobody ever remembers what happened to the microphones.

Because they use companding, you can't just use a Shure mike on an Azden receiver and expect it to work decently.

>I am also trying to locate a connector for the Wilson WRY-500 Antenna Rotor.
>I need the outside 8-Pin female connector that looks like a Cannon
>connector. If anybody has one that will work or could point me to a source,
>that too would make me grateful. Please respond to my email address.

Is it a Cannon P-connector style thing? If so, Connector World Supply in Seattle will have it.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

3492. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 22:22:39 UTC
From: jgboyles@aol.com
Message-ID: <20030519182239.19960.00000297@mb-m27.aol.com>
Source record: 35545

>Curious if anyone has built the solid state amplifer that RF Parts sells.

Which amplifier did you order? Looks like they sell several solid state Amps.
73 Gary N4AST

3493. Re: Orchid boarding houses

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 22:47:53 UTC
From: Ted Byers <r.ted.byers@sympatico.ca>
Message-ID: <Jedya.65$tj.10760@news20.bellglobal.com>
Source record: 35546
Cross-posted to: rec.gardens.orchids,sci.electronics.basics,rec.radio.amateur.homebrew

"Larry Dighera" <LDighera@att.net> wrote in message
news:0tifcvg9hf2hd7ddi4mpbpvav7qgb086l3@4ax.com...
> On Thu, 15 May 2003 00:16:07 -0400, "Ted Byers"
> <r.ted.byers@sympatico.ca> wrote:
>
> > While I can get a computer to do literally
> >anything I want, just by writing a program to do it
>
> You can't get a computer to SUCCESSFULLY divide by zero. :-)
>
Sure you can! The precise result is infinity. Floating point arithmetic has two useful identities: INF and NaN. NaN is an acronym for not a number, and is used whenever something realy bad happens: it just isn't useful in this context. INF represents infinity, and, while most FPUs will throw an exception with a divide by zero error, all one needs to do is catch and clear the exception (on Windows done by the OS and converted into a "structured exception"), and then set the result to INF. Of course, how easy or painful this is depends on what language you're using. This is all very simple, although it isn't very practical. That said, dividing by zero is something I generally don't want to do. In fact, I generally try to avoid it! In the software engineering I do, a divide by zero operation is generally a consequence of structural instability of a system given the parameters selected by the user. In such a case, it is best to test for a denominator of zero, and, when such a condition occurs, stop the simulation or analysis and notify the user about what has happened.

But I guess, in some respects, being able to get a computer to do anything I want it to do is guaranteed by more than two dozen years experience working with them, and thus knowing what they can and can't do, and thus guaranteeing that I never want a computer to do what I know they can't do. For example, I don't want to spend time making a computer that can speak English, or any other natural language, because natural language is multivocal (i.e. there are many examples of sentences that can have more than one meaning - a common tool in humour), and computers can handle only univocal languages. A computer can neither make nor understand a pun. Of course, down the road, some genius may well be able to prove to me that what I had thought was impossible is both possible and practical; but that is a different question.

> >(I can even get a computer to exhibit behaviours as complex as those of
almost
> >any animal; a fact which raises countless interesting philosophical
questions we probably
> >should avoid in this forum),

>
> That would be an interesting topic of discussion.
>
Indeed it is! I spent a large part of my second doctorate studying this
from different perspectives: philosophy, educational psychology, cognitive
science, software engineering, &c. But it is also a very difficult one and
an area where even experts seem to easily fall into error.

> >I would likely be quite dangerous trying to put together a circuit of any
kind.
>
> It's not as difficult as you fear.
>
I hope you're right.

> >Or maybe it is a question of simply never having done it before. Do you
know
> >of any good reference books which would show me how?
>
> These authors can make learning the fundamentals of electronic
> circuits painless:
>
> [snip]
>
> I'll cross-post this article to some of these newsgroups, and perhaps
> we'll get some additional help in getting you started in electronic
> circuit design:
>
> sci.electronics.basics,sci.electronics.design,rec.radio.amateur.homebrew

Terrific. Thanks a lot. I really appreciate this.

Cheers,

Ted

3494. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 23:38:05 UTC
From: Roln <roln@yahoo.com>
Message-ID: <xVdya.189144$pa5.185747@rwcrnsc52.ops.asp.att.net>
Source record: 35397

Hi Gary,

I got the mobile one, which uses two 2SC2879 transistors and should give me about 300 watts. A lot of hams in my area are using two or four transistor models and using a 12volt car battery for a power supply. I'm using an Icom 706 rig and this little 5x7" amplifier should look nice sitting next to it. I've been looking for something to build and this caught my eye. I will have a little over $100 for the parts, because I already had a few of the parts in my junk box. If you like, I'll be glad to keep in touch with you....letting you know how I'm getting along and/or if I get it working.

73's,
Roln - WB0AXN

"JGBOYLES" wrote in message:

> Which amplifier did you order? Looks like they sell several solid state Amps.
> 73 Gary N4AST

> >Curious if anyone has built the solid state amplifer that RF Parts sells.<<<
>

3495. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 23:44:04 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <8%dya.908666$F1.112401@sccrnsc04>
Source record: 35399

Roln -

The heat-sink is one the most important components for
a solid-state amplifier. If you find a surplus unit to use - I recommend
finding a machinist that can mill it absolutely flat (I'm not kidding) for
attachment
to your PC board.

Ron, W9NUP, built a 1 KW VHF amplifier using 4 MRF 141G modules with a
splitter and combiner running 28v @ 60+ amps.
The amp takes approx 50 watts to drive and fans run constantly for maximum
thermal cooling.

This is not the normal "rat race" type of combining, but rather based on
Myat Engineering's E*Star technology.
Any number of odd or even modules may be employed, making it possible to
grow the amplifier.

Here are some photos on K5OE's Homebrew web page:
http://members.aol.com/homebrewpics/w9nup_front.jpg

http://members.aol.com/homebrewpics/w9nup_rear.jpg

http://members.aol.com/homebrewpics/w9nup_bottom.jpg

http://members.aol.com/homebrewpics/w9nup_top.jpg

Good luck !

w9gb
--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"Roln" <roln@yahoo.com> wrote in message
news:q48ya.185429$pa5.183617@rwcrnsc52.ops.asp.att.net...
> Howdy!
>
> Curious if anyone has built the solid state amplifer that RF Parts sells.
> I ordered all the components and now I'm ready to start assembling. I
did
> not a order heat sink....I'm hoping I can find something locally that will
> work....for less money.
> Anyone here using a home-brew solid state amp?
>
> Roln
>

>

3496. Re: 10.5 Ghz microwave emitter source

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-19 23:45:54 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.19330c91329281ab989688@news-central.giganews.com>
Source record: 35398

```
In article <b8slj5$85a$3@news.oregonstate.edu>,
JKolstad71HatesSpam@Yahoo.Com says...
> "Mark Boehler" <mboehler@yahoo.com> wrote in message
> news:516e3cef.0305011514.5ea75030@posting.google.com...
> > Hi. I hope someone out there can help me. I am trying to find a
> > place to get a 10.5Ghz microwave emitter.
>
> Check out www.shfmicro.com !
>
> ---Joel Kolstad
>
>

It looks like shfmicro.com has downsized their Gunn source inventory.
They no longer appear to sell the 10 GHz MA/COM units or the optional
100 mW diodes that fit them. Anyone know of any alternate sources for
these parts?

-- jm

-------------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-------------------------------------------------------
```

3497. Annc: PC boards available for hybrid DDS/PLL synth project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 00:29:51 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193316b37a46101598968a@news-central.giganews.com>
Source record: 35401
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.equipment

From the better-late-than-never department, we now have boards and final schematics/BOMs for the general-purpose UHF/microwave synthesizer design that was discussed last year (http://makeashorterlink.com/?B13B320A4).

This synthesizer can generate a CW signal at any desired frequency from the upper VHF region to several GHz with 1 Hz resolution, under the control of either a PC parallel port or an Atmel AVR ATmega128 microcontroller.

http://www.qsl.net/ke5fx/synth.html

Richard Hosking (VK6BRO) and I have just submitted a more complete article on this project to QEX/Communications Quarterly. There's enough information on the web page to build and use the synthesizer, but I'll be glad to forward a (private) preprint of the complete article via email upon request.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3498. Re: Help with id potted choke, transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 02:55:31 UTC
From: Carroll Conklin <aconklin@rcn.com>
Message-ID: <babqti$kd7$1@bob.news.rcn.net>
Source record: 35400
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.homebrew

Robert,

This looks like ham radio stuff. I would bet that the transformer with all the taps is a filament transformer. You have the HV transformer (caps go to tube rectifiers--probably 866's). Two chokes, of which one is probably swinging and the other not, This made for good regulation between 10% load and full load. I would guess the filament transformer has at least two hefty 2.5V windings and the remainder are probably 10V, excluding the primary of course. Good find!

Carroll

"Robert Mozeleski" <moz@ncx.com> wrote in message news:vcg883gq22eo44@corp.supernews.com...
> I need help id'ing these chokes and transformers i picked up today at the local flea mart. http://userweb.ncx.com/moz/choke.jpg
> (120k jpg file). Markings on the transformer are WHEELER K-54J757-2 120V 60CPS 750VCT 220MA. Rather huge transformer with two
> large porcelain top caps soldered on. 6 1/2" x 6" x 4 3/4". Might have been part of a homebrew setup, but i am wondering if
> anybody knows the original usage. Markings on the chokes are ACME ELECTRIC NQ-T-151 L-301. Measures about 1/2 ohm, can't
> measure inductance until i bring it to work. Last is a transformer? Seems to have multiple primaries and or secondaries. And help
> is appreciated.
>
>

3499. Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 03:11:13 UTC
From: clamousin <clamousin@carolina.rr.com>
Message-ID: <3EC99CCD.6060205@carolina.rr.com>
Source record: 35402

I am debating on attempting to build a vacuum tube at home. I will need a refrigeration vacuum pump, probably a diffusion pump, and a way to make a seal. I'm interested in this just to see if I can. The plan as it stands is to use a nichrome wire as a heater and copper for the indirect cathode. I may use some type of tarry substance smeared a couple of inches on a piece of wood and embedding the end of a jar in it. I've heard of a book by van der bilj called the thermoelectric vacuum tube from the early 20's to help me with specifics. Has anyone heard of this book? Has anyone already made attempts on a project as crazy as this? If I can get a graph of the tubes vitals, maybe I could try to build a regen around it.
Tnx,
Chris

3500. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 03:33:11 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <bac7d9oke1@news.utelfla.com>
Source record: 35403

> I am debating on attempting to build a vacuum tube at home. I will need
> a refrigeration vacuum pump, probably a diffusion pump, and a way to
> make a seal. I'm interested in this just to see if I can. The plan as it
> stands is to use a nichrome wire as a heater and copper for the indirect
> cathode. I may use some type of tarry substance smeared a couple of
> inches on a piece of wood and embedding the end of a jar in it. I've
> heard of a book by van der bilj called the thermoelectric vacuum tube
> from the early 20's to help me with specifics. Has anyone heard of this
> book? Has anyone already made attempts on a project as crazy as this? If
> I can get a graph of the tubes vitals, maybe I could try to build a
> regen around it.

H. Peter Friedrichs, the author of "The Voice of the Crystal" (available from www.lindsaybks.com - and no, I don't have any financial interest in it!), has been experimenting with making his own vacuum tubes and point-contact transistors. Perhaps he can help you out. I don't know if he wants his e-mail address posted to a newsgroup, so I will send him a copy of your original posting privately and suggest that he post a reply.

3501. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 04:23:37 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EC9AEBA.805105BA@rica.net>
Source record: 35405

clamousin wrote:
>
> I am debating on attempting to build a vacuum tube at home. I will need
> a refrigeration vacuum pump, probably a diffusion pump, and a way to
> make a seal. I'm interested in this just to see if I can. The plan as it
> stands is to use a nichrome wire as a heater and copper for the indirect
> cathode. I may use some type of tarry substance smeared a couple of
> inches on a piece of wood and embedding the end of a jar in it. I've
> heard of a book by van der bilj called the thermoelectric vacuum tube
> from the early 20's to help me with specifics. Has anyone heard of this
> book? Has anyone already made attempts on a project as crazy as this? If
> I can get a graph of the tubes vitals, maybe I could try to build a
> regen around it.
> Tnx,
> Chris

I would skip the indirectly heated cathode, and use a center tap
grounded heater supply. If that works you can go for an upgrade.

Wood is a terrible thing to use around vacuum, because it keeps
releasing gas even if none leaks through from the outside. It is full
of closed cells full of gas. I would seal the leads with epoxy with a
piece of glass tubing going through so you can connect a vacuum pump
while the tube is being tested. If you like what you see, just melt
the glass tube shut (and separate it into two pieces) with a propane
torch, while the pump is running. A triode should be pretty easy.

--
John Popelish

3502. Addendum

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 05:59:38 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <bacfvqsjt1@news.utelfla.com>
Source record: 35404

I'm sorry to reply to my own post, but I found the link to Pete's home page:

http://www.mindspring.com/~pfriedr/

Definitely worth a look.

3503. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 12:40:34 UTC
From: James Skalski <jskalski@yahoo.com>
Message-ID: <3ECA224E.8030602@yahoo.com>
Source record: 35406

>
>>I am debating on attempting to build a vacuum tube at home. I will need
>>a refrigeration vacuum pump, probably a diffusion pump, and a way to
>>make a seal.

The first time that I thought about the vacuum in tubes I tried to
figure how they did it. I just thought that they heated the whole tube,
then sealed it. The vacuum formed when the tube cooled. Sorta like the
vacuum formed in canned goods during the canning process. Maybe passing
an inert gas into the tube so contaminants could be flushed out.

I am surprised to think that a vacuum pump was used. Anyone know what
the commercial guys do or did?

I have no knowledge of the commercial process. I may be wrong. (It has
happened before :)

Jim n2go

3504. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 13:41:07 UTC
From: jgboyles@aol.com
Message-ID: <20030520094107.19555.00000011@mb-m10.aol.com>
Source record: 35407

>I got the mobile one, which uses two 2SC2879 transistors and should give me
>about 300 watts.
Hi Roln,
I see the one your are talking about now. I have not built this amp, but I have built solid state amplifiers using the circuit boards from Communication Concepts. I think they have the equivalent to the one you are going to build. From my experience, if you have the parts and instructions, you know that the circuit board with the rf transistors is just a small part of the overall amp. You must have a suitable heat sink, one with heat spreading material built in, or use some copper sheet for heat spreading, and bolt that to a heat sink. A cooling fan is not a bad idea. You have to have t/r relaying. You have to have a Low pass filter for each band you intend to operate. If you intend to operate multiple bands, you have to come up with a band switch to change filters, or have plug in filters for for each band. I notice rf parts said you *may* need a filter. To meet FCC specs. on spectral purity with this type of amplifier, you *will* need filters.
An ALC circuit would be nice to keep you from overdriving the amp, and some reverse power protection might keep you from smoking the transistors if your mobile antenna or transmission line has problems. Mobile antennas have more problems than fixed ones, or at least my mobile antenna does. I copied my alc protection from the Ameritron ALS 600 solid state amp.
It would be slightly more trouble to get 2 boards and suitable splitter and combiner circuits and get 500-600 watts. I think that is about as much as a 12 volt auto electrical system will handle. I have talked to several mobiles running 500 watts.
You probably knew all this, but if you want any details on any of the auxillary circuits, drop me an email. Good luck, and let us know how it turns out.

73 Gary N4AST

3505. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 13:50:49 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3ECA3328.7030906@invalid.invalid>
Source record: 35408

James Skalski wrote:
> I am surprised to think that a vacuum pump was used. Anyone know what
> the commercial guys do or did?

Note that commercial small receiving tubes have a "nipple" - at the top in the miniature tubes, hidden in the black phenolic base in octal and loctal tubes. I presume that's where they melted the pump tube closed.

Which begs the question, what happened to the "nipples" on tubes with plate caps? You'd think they'd have to have one at the bottom but I never see any evidence of that.

I'm also curious how they manage to raise the vacuum in ceramic tubes, like the ones used in broadcast transmitters. (3CX800 etc.)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3506. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 14:04:27 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3ECA35EB.5010909@ay.com.au>
Source record: 35409

Doug Smith W9WI wrote:

> I'm also curious how they manage to raise the vacuum in ceramic tubes,
> like the ones used in broadcast transmitters. (3CX800 etc.)

I think they have a soft copper tube that is cripped off and braised
closed to retain the vacuum in the long-term. The same with the all
metal envelope devices.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Gibbous (75% of Full)

3507. Vectron 10 MHz OCXO - Specifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 14:41:15 UTC
From: "Thomas M. Alldread" <tma@island.net>
Message-ID: <jifkcv4n1k0lp6vtt8k2v4lacr1pdv6oua@4ax.com>
Source record: 35410

Greetings All:

I have a surplus Vectron model CO-245B19-J 10 MHz OCXO. I
understand these are very stable oscillators (.001 PPM/24hours???) and
I wish to make use of it as a frequency standard.

It is mounted in a rectangular can about 4 inches tall and 2
inches square with an 8 pin octal plug on the bottom.

I wonder if anyone in this group happens to know where I might
find a specification sheet with pinout information for it?

Many thanks in advance for any help!

73 & Enjoy!
Tom, VA7TA

3508. Re: Vectron 10 MHz OCXO - Specifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 15:23:57 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <hMrya.197333$pa5.196381@rwcrnsc52.ops.asp.att.net>
Source record: 35411

http://www.vectron.com/products/catalog/catalog.pdf

W4ZCB
"Thomas M. Alldread" <tma@island.net> wrote in message
news:jifkcv4n1k0lp6vtt8k2v4lacr1pdv6oua@4ax.com...
> Greetings All:
>
> I have a surplus Vectron model CO-245B19-J 10 MHz OCXO. I
> understand these are very stable oscillators (.001 PPM/24hours???) and
> I wish to make use of it as a frequency standard.
>
> It is mounted in a rectangular can about 4 inches tall and 2
> inches square with an 8 pin octal plug on the bottom.
>
> I wonder if anyone in this group happens to know where I might
> find a specification sheet with pinout information for it?
>
> Many thanks in advance for any help!
>
> 73 & Enjoy!
> Tom, VA7TA

3509. FS: NIB Turns Counters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 15:57:56 UTC
From: msix@nmia.com
Message-ID: <8gsya.2346$Qk2.872@fe01.atl2.webusenet.com>
Source record: 35412

```
2 each NIB Groth TC-2 unused.
2 by 4 inches, 0 to 100 turns.
$48 each pp 48
73 W7ZFB - Good in QRZ
n
```

3510. Re: Vectron 10 MHz OCXO - Specifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 17:43:13 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3ECA6931.AB396D15@neicoltech.org>
Source record: 35413

"Thomas M. Alldread" wrote:

> Greetings All:
>
> I have a surplus Vectron model CO-245B19-J 10 MHz OCXO. I
> understand these are very stable oscillators (.001 PPM/24hours???) and
> I wish to make use of it as a frequency standard.

Ahhhhh Vectron...that name brings back memories. I worked in satcom for a few years and we built a lot of our own equipment. One of our requirements was for a very stable VCXO in the 60MHz range with wide deviation chracteristics (some said impossibly wide). Vectron was one of the vendors I found who was willing to try and make these for us.

After much gnashing of teeth they did!

Bob L.

3511. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 18:03:52 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>
Source record: 35414

On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:

>Doug Smith W9WI wrote:
>
>> I'm also curious how they manage to raise the vacuum in ceramic tubes,
>> like the ones used in broadcast transmitters. (3CX800 etc.)
>
>I think they have a soft copper tube that is cripped off and braised
>closed to retain the vacuum in the long-term. The same with the all
>metal envelope devices.

I have some experience with vacuum.

A common technique with glass is to start with a premade shape, with a long tube at one end. This is hooked up to a high vacuum system, and the whole system is pumped down, typically into at least the 10 ^-6 Torr range.

If you want higher vacuum (less remaining gas molecules) heating prior to sealing, and/or waiting longer will help.

Diffusion pumps are older technology, more modern setups would use either a cryopump or a turbomolecular for the hivac part.

Once it is down to vacuum, a portion of the glass tube is heated to a taffy-like stage, and the external atmosphere will push it closed until it seals together. Then it is broken off on the non-vacuum tube side, a little more torch to round it off, and it is ready to go.

Non-glass enclosures such as ceramic or metal typically use a metal tube as described above. Pure annealed copper forms a very good seal, which could be backed with solder or braze.

A concern with a vacuum tube is the feedthrough wires that electrically connect to the interior filaments. If they are not a material with a similar coefficient of expansion to the glass used, you can develop micro-leaks there. Special metal wires are used, matched to the Pyrex commonly used here.

Inside the vacuum portion, as mentioned earlier, some materials outgas significantly and should not be used in a real vacuum. Metals, sealed ceramics, and glass are the best choices inside.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3512. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 18:40:30 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3eca75ba.4210125@news.freeserve.net>
Source record: 35415

On Tue, 20 May 2003 12:40:34 GMT, James Skalski <jskalski@yahoo.com>
wrote:

>
>>
>>>I am debating on attempting to build a vacuum tube at home. I will need
>>>a refrigeration vacuum pump, probably a diffusion pump, and a way to
>>>make a seal.
>
>
>The first time that I thought about the vacuum in tubes I tried to
>figure how they did it. I just thought that they heated the whole tube,
>then sealed it. The vacuum formed when the tube cooled. Sorta like the
>vacuum formed in canned goods during the canning process. Maybe passing
>an inert gas into the tube so contaminants could be flushed out.
>
>I am surprised to think that a vacuum pump was used. Anyone know what
>the commercial guys do or did?
>
>I have no knowledge of the commercial process. I may be wrong. (It has
>happened before :)
>
>Jim n2go
>
Jim , ISTR that in the old days (pre octal base) there was a small
piece of Magnesium in the envelope, after the envelope was vacuumed
the magnesium was fired to deplete the envelope further. Not sure
where I remember this from though

3513. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 20:32:45 UTC
From: Roln <roln@yahoo.com>
Message-ID: <Nhwya.920878$F1.113901@sccrnsc04>
Source record: 35416

Thanks for the info on using a heat sink. Between the heat sink and
filters, I'm finding out I need a lot more stuff than anticipated. It's
no wonder the commercial built solid state amps are SO expensive!!
Roln

"G.Beat" <abuse@comcast.com> wrote in message
news:8%dya.908666$F1.112401@sccrnsc04...
> Roln -
>
> The heat-sink is one the most important components for
> a solid-state amplifier. If you find a surplus unit to use - I recommend
> finding a machinist that can mill it absolutely flat (I'm not kidding) for
> attachment
> to your PC board.
>

3514. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 20:41:33 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bae3ts$ge2$1@hercules.btinternet.com>
Source record: 35417

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3eca75ba.4210125@news.freeserve.net...
> On Tue, 20 May 2003 12:40:34 GMT, James Skalski <jskalski@yahoo.com>
> wrote:
>
> >
> >>
> >>>I am debating on attempting to build a vacuum tube at home. I will need
> >>>a refrigeration vacuum pump, probably a diffusion pump, and a way to
> >>>make a seal.
> >
> >
> >The first time that I thought about the vacuum in tubes I tried to
> >figure how they did it. I just thought that they heated the whole tube,
> >then sealed it. The vacuum formed when the tube cooled. Sorta like the
> >vacuum formed in canned goods during the canning process. Maybe passing
> >an inert gas into the tube so contaminants could be flushed out.
> >
> >I am surprised to think that a vacuum pump was used. Anyone know what
> >the commercial guys do or did?
> >
> >I have no knowledge of the commercial process. I may be wrong. (It has
> >happened before :)
> >
> >Jim n2go
> >
> Jim , ISTR that in the old days (pre octal base) there was a small
> piece of Magnesium in the envelope, after the envelope was vacuumed
> the magnesium was fired to deplete the envelope further. Not sure
> where I remember this from though

It was called a 'getter'. I think barium was used a lot for this.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3515. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 21:11:20 UTC
From: mikea@mikea.ath.cx
Message-ID: <bae5lo$qe8$2@puck.litech.org>
Source record: 35418

Leon Heller <leon_heller@hotmail.com> wrote:

> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3eca75ba.4210125@news.freeserve.net...

> > Jim , ISTR that in the old days (pre octal base) there was a small
> > piece of Magnesium in the envelope, after the envelope was vacuumed
> > the magnesium was fired to deplete the envelope further. Not sure
> > where I remember this from though

> It was called a 'getter'. I think barium was used a lot for this.

Cesium is another candidate.

--
Mike Andrews
mikea@mikea.ath.cx
Tired old sysadmin since 1964

3516. Re: solid state amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 21:31:24 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <82QCt0Ls6py+EwEw@philstheboss.freeserve.co.uk>
Source record: 35419

W(GB,

>This is not the normal "rat race" type of combining, but rather based on
>Myat Engineering's E*Star technology.
>Any number of odd or even modules may be employed, making it possible to
>grow the amplifier.

Could not find any URL for Myat Engineering on Google.

Any pointers?

Tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3517. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-20 22:24:59 UTC
From: "Geoffrey G. Rochat" <777geoff777@777pkworks777.777com777>
Message-ID: <bae9tlbin1@news.utelfla.com>
Source record: 35420

> I have no knowledge of the commercial process. I may be wrong. (It has
> happened before :)

Tubes still have quite a following amongst the golden-eared audiophile crowd and electric guitar players, and Ned Carlson of Triode Electronics caters to that market. On his website is a lot of tube information, including information related to tube design, tube materials and tube manufacture:

http://www.triodeel.com/mailbag.htm

3518. Re: FA: MUST SEE TUNER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 01:29:39 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1934765c227af96f9898b5@192.168.42.131>
Source record: 35421

In article <20030520145641.20276.00000014@mb-m01.aol.com>, johnr43867
@aol.com says...

> x-no-archive: Yes
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=16702&item=3025197035

And that item is pertinent to ham radio, how? Exactly?

If I want a stereo, I'll go buy a dedicated one. It's neither
necessary nor desirable (to my view) to turn a PC into a cheap broadcast
receiver.

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

3519. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 04:30:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vcm06vdqcj9pfc@corp.supernews.com>
Source record: 35422

Avery Fineman wrote:
>
>
> Acetone is a good solvent for nearly all marker pen ink, lacquers,
> acetate and nitrate adhesives, polyester and polystyrene, and
> most epoxy resins used in making epoxy-fiberglass and
> "casting plastic" things. Michael's craft stores sometimes have
> acetone, usually have casting plastic and hardener.
> . . .

I've found acetone to be readily available at paint stores, and in the paint department of home-handyman stores. It's probably less expensive there than at craft stores.

Roy Lewallen, W7EL

3520. QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 04:36:29 UTC
From: pacbell <trowley@pacbell.net>
Message-ID: <hnDya.2504$wa.160062698@newssvr14.news.prodigy.com>
Source record: 35432

Hi
I'm looking to build a QRP rig for 40 meters. Does anyone have experience
with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other suggestions?

73
Tom
KG6QPV

3521. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 06:59:12 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0305202259.7d77024e@posting.google.com>
Source record: 35423

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:<bae3ts$ge2$1@hercules.btinternet.com>...
> > On Tue, 20 May 2003 12:40:34 GMT, James Skalski <jskalski@yahoo.com>
> > wrote:
> > Jim , ISTR that in the old days (pre octal base) there was a small
> > piece of Magnesium in the envelope, after the envelope was vacuumed
> > the magnesium was fired to deplete the envelope further. Not sure
> > where I remember this from though
>
> It was called a 'getter'. I think barium was used a lot for this.
>
> Leon

Hi all,
IMHO, barium was the main component. The mixture was evaporated after the tube was exhausted and separated from the vacuum pump. It forms the "mirror" on the top of miniature tubes. (If gas gets inside, the mirror turns into white powder.)

BR from Ivan OK1SIP

3522. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 07:05:02 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0305202305.36c920f3@posting.google.com>
Source record: 35424

Gary S. <Idontwantspam@net> wrote in message
news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
> On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
> ...Inside the vacuum portion, as mentioned earlier, some materials outgas
> significantly and should not be used in a real vacuum. Metals, sealed
> ceramics, and glass are the best choices inside...
>
Hi all,
putting sealed wires through Pyrex glass is a hard task for an average
ham. Most epoxy resins do not outgas much if mixed and hardened
properly. They may be a perfect material for homebrew high-vacuum
devices, even for a long-term sealing.
Special wax, fat and cautchouc mixtures are used for temporary vacuum
sealing, too.
BR from Ivan

3523. NE602 Balanced Modulator Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 07:48:52 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0305202348.6c2f3169@posting.google.com>
Source record: 35425

I'm using an NE602 as a balanced modulator in my 20 meter QRP DSB transceiver.
Sort of the same design used in the Wee-Willy rig. VXO into pin 6 (unbalanced). Audio (from an LM386 serving as mic amp) into pin 8 (also unbalanced).

I'm getting disappointing levles of carrier suppression. I don't have the gear to measure it accurately, but I'm getting more carrier than I got when I used diode modulators on earlier rigs. I estimate that the carrier is about 10 db below voice peaks. I should be doing better.

Any thoughts on how to improve carrier suppression with the NE-602? I've tried reducing the signal level at pin 6. This seems to help, but not enough.

Would it help if I used a balance (two pin) input for the VXO input?

73 Bill CU2JL N2CQR
http://planeta.clix.pt/n2cqr

3524. Re: NE602 Balanced Modulator Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 10:22:31 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bafkih$l7o@library1.airnews.net>
Source record: 35426

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:97f305da.0305202348.6c2f3169@posting.google.com...
> I'm using an NE602 as a balanced modulator in my 20 meter QRP DSB
> transceiver.
> Sort of the same design used in the Wee-Willy rig. VXO into pin 6
> (unbalanced). Audio (from an LM386 serving as mic amp) into pin 8
> (also unbalanced).

Check your pinouts against the datasheet.

Pin 8 is supposed to be Vcc, typically between 4.5 and 8 volts. Pins 1 and 2 are the main input, and pin 6 is the LO input (base of the oscillator transistor).

3525. Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 11:09:22 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <u9nmcv88eudjq45deeqrbtl6en9ou1pbou@4ax.com>
Source record: 35427

Hi,

I have just found out that my hands free mobile microphone is not
giving the radios any audio.

I have checked all the interconnecting leads etc and have traced the
fault back to the neckband. The wire from mic. to connector is fine so
I am beginning to think that the insert is faulty.

It is a direct short. I am not sure if this means it is faulty or not
as I don't know a great deal about electret microphones at all.

Any confirmation would be appreciated as all I need to know is 'do I
need a new insert'...

Cheers in advance,

73, Iain (M0PCB)

3526. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 12:02:39 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <mjqmcv0kv6edqfu5tfiha0m8m2tcfsb7ld@4ax.com>
Source record: 35428

>It is a direct short. I am not sure if this means it is faulty or not
>as I don't know a great deal about electret microphones at all.

No it shouldn't be a direct short.

An electret mic is just a capacitor basically, so it should be open circuit.

But then, it depends if theirs any other circuitry inside it, some electrets
that are used in radios have built in circuitry, yours prolly hasn't though.

Clive

3527. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 12:10:51 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <d1rmcvstqa9q1evlmae7ajn1g5l28fntke@4ax.com>
Source record: 35429

On Wed, 21 May 2003 13:02:39 +0100, c.a.m@antispam.blueyonder.co.uk
wrote:

>
>>It is a direct short. I am not sure if this means it is faulty or not
>>as I don't know a great deal about electret microphones at all.
>
>No it shouldn't be a direct short.
>
>An electret mic is just a capacitor basically, so it should be open circuit.
>
>But then, it depends if theirs any other circuitry inside it, some electrets
>that are used in radios have built in circuitry, yours prolly hasn't though.
>
>Clive

Hi Clive,

That's what I was after. Not sure what's inside the capsule itself but
it is a dead short across the pins. There is a thin mic. cable from
the neck bands to a small box with the driver circuit etc in it. Made
by Mobilite/Heatherlite...

Right, off to get hold of a new insert (wishing I had got some at the
last rally/junk sale as they were really cheap!!)

Cheers,

Iain M0PCB

3528. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 12:30:49 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <k2smcvcs16gpg2pdtlc499b4h7qho5ti2o@4ax.com>
Source record: 35430

On Tue, 20 May 2003 21:30:22 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>> Acetone is a good solvent for nearly all marker pen ink, lacquers,
>> acetate and nitrate adhesives, polyester and polystyrene, and
>> most epoxy resins used in making epoxy-fiberglass and
>> "casting plastic" things. Michael's craft stores sometimes have
>> acetone, usually have casting plastic and hardener.
>> . . .
>I've found acetone to be readily available at paint stores, and in the
>paint department of home-handyman stores. It's probably less expensive
>there than at craft stores.
>
Most hardware stores and home centers will have it, usually in the
paint department.

You probably do not want to buy vastly more than you will be using
short term, as it is far more volatie and flammable than gasoline. A
pint or quart might be better than a gallon for most people.

Seal it tight, there are few things which evaporate faster than
acetone.

Fumes are bad for you to breathe, as well as highly flammable. Use
only in a very well ventilated area away from sparks and flames.

High concentration alcohol is a good solvent for many inks.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3529. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 12:42:23 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <pesmcvcapf6sujprtclgtrb71evb22q61j@4ax.com>
Source record: 35431

On 21 May 2003 00:05:02 -0700, remove_ok1sip@atlas.cz (OK1SIP) wrote:

>Gary S. <Idontwantspam@net> wrote in message
news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
>> On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
>> ...Inside the vacuum portion, as mentioned earlier, some materials outgas
>> significantly and should not be used in a real vacuum. Metals, sealed
>> ceramics, and glass are the best choices inside...
>>
>Hi all,
>putting sealed wires through Pyrex glass is a hard task for an average
>ham. Most epoxy resins do not outgas much if mixed and hardened
>properly. They may be a perfect material for homebrew high-vacuum
>devices, even for a long-term sealing.
>Special wax, fat and cautchouc mixtures are used for temporary vacuum
>sealing, too.
>BR from Ivan

The special wires with glass sealed around them is probably beyond a
home workshop. Kovar is the special alloy which expands and contracts
at the same rate as Pyrex.

I am sure someone adept with glass work could recycle the existing
passthroughs from an old tube into a new one.

Good epoxy is not too bad inside a vacuum, but those other materials
will limit how good a vacuum is possible.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3530. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 15:51:35 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3ECBA02D.9020700@attbi.com>
Source record: 35433

Rather than reuse old tube odd's & ends, go by your local neon sign shop, They use kovar wire on their electrodes, get some broken or "old ends from a sign they have rebuilt., crush the glass and salvage the wire. Also the glass blower may be willing to help you. There is an old book (by RCA IIRC) that gives a lot of details on cleaning etc for tube production.
Bill Higdon

Gary S. wrote:
> On 21 May 2003 00:05:02 -0700, remove_ok1sip@atlas.cz (OK1SIP) wrote:
>
>
>>Gary S. <Idontwantspam@net> wrote in message
news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
>>
>>>On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
>>>...Inside the vacuum portion, as mentioned earlier, some materials outgas
>>>significantly and should not be used in a real vacuum. Metals, sealed
>>>ceramics, and glass are the best choices inside...
>>>
>>
>>Hi all,
>>putting sealed wires through Pyrex glass is a hard task for an average
>>ham. Most epoxy resins do not outgas much if mixed and hardened
>>properly. They may be a perfect material for homebrew high-vacuum
>>devices, even for a long-term sealing.
>>Special wax, fat and cautchouc mixtures are used for temporary vacuum
>>sealing, too.
>>BR from Ivan
>
>
> The special wires with glass sealed around them is probably beyond a
> home workshop. Kovar is the special alloy which expands and contracts
> at the same rate as Pyrex.
>
> I am sure someone adept with glass work could recycle the existing
> passthroughs from an old tube into a new one.
>
> Good epoxy is not too bad inside a vacuum, but those other materials
> will limit how good a vacuum is possible.
>
> Happy trails,
> Gary (net.yogi.bear)
> ----------

> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

3531. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 16:48:43 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vcnbfflblsd9b8@corp.supernews.com>
Source record: 35434

There is a special solder that will wet glass and this is used to help seal
the element wires. I saw a spool at a hamfest once and looked at it
intently, the wire was quite soft and shiny and the main constituent was
not a common metal but I can't recall it. I have a good memory but the
recall is gone. maybe someone will remember>
tnx
hank wd5jfr
"clamousin" <clamousin@carolina.rr.com> wrote in message
news:3EC99CCD.6060205@carolina.rr.com...
> I am debating on attempting to build a vacuum tube at home. I will need
> a refrigeration vacuum pump, probably a diffusion pump, and a way to
> make a seal. I'm interested in this just to see if I can. The plan as it
> stands is to use a nichrome wire as a heater and copper for the indirect
> cathode. I may use some type of tarry substance smeared a couple of
> inches on a piece of wood and embedding the end of a jar in it. I've
> heard of a book by van der bilj called the thermoelectric vacuum tube
> from the early 20's to help me with specifics. Has anyone heard of this
> book? Has anyone already made attempts on a project as crazy as this? If
> I can get a graph of the tubes vitals, maybe I could try to build a
> regen around it.
> Tnx,
> Chris
>

3532. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 16:55:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vcnbs7lstiq8d@corp.supernews.com>
Source record: 35435
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Winding impedance, whether inductive, resistive, or a combination, appears in parallel across the transformer winding. So to keep from disturbing the circuit the transformer is connected to, this impedance should be considerably higher than the impedance of the circuit. Making it more than 5 or 10 times greater than the circuit impedance doesn't cause any problems, but it's often hard to do and a waste of effort.

Many of the ferrites used for broadband transformers exhibit primarily resistive winding impedance at the frequency of use. This is often an advantage over inductive impedance, since it stays relatively constant over a wide frequency range and doesn't introduce undesirable resonance effects. A purely or almost purely inductive impedance is only necessary when enough power is involved to make transformer dissipation a problem.

Roy Lewallen, W7EL

Jason Hsu wrote:
> Thanks to everyone who gave me great advice on the improved
> SWR/wattmeter I have been working on this semester for an independent
> study project in my graduate work. I put my device together, and it
> works. Though it doesn't quite have the performance I hoped for, it
> still runs rings around the MFJ cross-needle meters (high SWR and QRP
> capability as well as 100W capability). In case you are wondering, I
> am using FT82-43 toroids for the transformers with #30 wire for the
> primary (high voltage, low current) windings. I really pushed the
> limits on many things, such as the capability of LM324s, the
> capability of LM3914s, the current capacity of wire (>1A and #30 wire
> on an FT50-43 core do not mix), the space needed for the wires
> connecting 20-40 LEDs, and what happens when you accidentally connect
> a capacitor the wrong way (leaking fluid, noise, mess on the
> breadboard).
>
> I am working on my report, and one thing that still puzzles me is the
> significance of the inductive reactance in transformers. The design I
> am using is based on the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html
>
> I have heard that the inductive reactance across a transformer winding
> should be at least 4 times the resistance that is connected across it.
> There is 100 ohms of resistance across the voltage transformer, so
> that should mean j400 ohms of resistance are required in the winding.
> According to the software programs of Reg Edwards (and the ARRL
> formulas), the secondary winding (the 1-turn side) of the voltage
> transformer would have only .45uH with one of the FT82-43 cores I am

> using. Most other SWR meter designs actually use SMALLER cores (FT50,
> even FT37), which have even less inductance per turn. The .45uH is
> only j5 ohms on 160m and j84 ohms on 10m, a far cry from j400 ohms.
>
> Could someone please shed some light on what is going on? How much
> inductive reactance is REALLY needed, and what would have happened if
> I did not have enough? Why can't RF transformers use plastic or air
> cores? (They would be much cheaper.)
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

3533. Re: re-chargeable lithium (Li-ion) battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 16:58:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vcnc238r8vdae9@corp.supernews.com>
Source record: 35436

That's a really interesting observation, and one that I'd never considered. Looks like some experiments are in order.

Wonder if the self discharge rate varies significantly from batch to batch of cells of the same brand and type.

Roy Lewallen, W7EL

Dick Carroll; wrote:
> I've learned, in the past year, that the brand of the cells involved means a lot regarding the selfdischarge rate. Some are relatively longlived while others are definitely not.
> When I got the digital camera about a year ago I also purchased a quick charger that came with a set of 4 AA 1800 mA NiMH cells that are marked "Digipower" brand, with no further ID. After a few charge cycles they are very satisfactory in their low selfdischarge rate, lasting up to a couple months or even longer. I later bought two backup sets, one Energizer and the other Ray-o-vac brands. The Ray-o-vac set lasts about as well as the Digipower, after cycling them in over several charges. The Energizers won't hold up more than three weeks.
>
> I also carry set of high quality Alkalines along just in case!
>
> Anecdotal, but might be of interest.
>
> Dick
>

3534. Re: NE602 Balanced Modulator Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 17:03:03 UTC
From: "Sverre Holm (LA3ZA)" <la3za.0junk4me@qsl.net>
Message-ID: <yiOya.331$Hb.7365@news4.e.nsc.no>
Source record: 35437

Check the Elecraft web site (www.elecraft.com) and look for the schematic for the KSB2 SSB option. It uses the 602 also, and has a pot to fine tune the carrier suppression to a better performance than the 602 does on its own.

73 Sverre, LA3ZA
www.qsl.net/la3za

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:97f305da.0305202348.6c2f3169@posting.google.com...
> I'm using an NE602 as a balanced modulator in my 20 meter QRP DSB
> transceiver.
> I'm getting disappointing levles of carrier suppression.

3535. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 17:08:32 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3ECBB37A.94A2D360@ieee.org>
Source record: 35438

OK1SIP wrote:

> Gary S. <Idontwantspam@net> wrote in message
news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
> > On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
> > ...Inside the vacuum portion, as mentioned earlier, some materials outgas
> > significantly and should not be used in a real vacuum. Metals, sealed
> > ceramics, and glass are the best choices inside...
> >
> Hi all,
> putting sealed wires through Pyrex glass is a hard task for an average
> ham. Most epoxy resins do not outgas much if mixed and hardened
> properly. They may be a perfect material for homebrew high-vacuum
> devices, even for a long-term sealing.
> Special wax, fat and cautchouc mixtures are used for temporary vacuum
> sealing, too.
> BR from Ivan

How about using the wires and some glass from a light bulb.

Bill K7NOM

3536. Re: Significance of inductance in transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 17:25:11 UTC
From: W5DXP <Cecil.A.Moore@ieee.org>
Message-ID: <3ECBB677.7070009@ieee.org>
Source record: 35439
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Roy Lewallen wrote:
> Winding impedance, whether inductive, resistive, or a combination,
> appears in parallel across the transformer winding. So to keep from
> disturbing the circuit the transformer is connected to, this impedance
> should be considerably higher than the impedance of the circuit. Making
> it more than 5 or 10 times greater than the circuit impedance doesn't
> cause any problems, but it's often hard to do and a waste of effort.

While learning transformer design at Texas A&M, we used a rule-of-thumb
of 10x. I notice that 5x seems to be acceptable for a balun.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3537. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 17:38:44 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <4aencvsegh7foi2b4hsrhegms1ujp4jmhb@4ax.com>
Source record: 35440

On Wed, 21 May 2003 11:48:43 -0500, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>There is a special solder that will wet glass and this is used to help seal
>the element wires. I saw a spool at a hamfest once and looked at it
>intently, the wire was quite soft and shiny and the main constituent was
>not a common metal but I can't recall it. I have a good memory but the
>recall is gone. maybe someone will remember>
>tnx

Perhaps indium or an indium alloy?

Along with a little borax as a flux, you can get solder to adhere to
some interesting materials.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3538. Re: QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 17:48:06 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vcnf03tmac65fd@corp.supernews.com>
Source record: 35441

Tom

In general, the Vectronics kits have tended to be a bit marginal, although they are cheap and widely available.

The SW-40+, on the other hand, is widely respected, and there is a LOT of information on the net about it, including a wonderful web site by VE3DNL which is also on the QRP-L CD. The downside is that Dave Benson is pretty well swamped, so his delivery times aren't great, but you can check on his web site how long the wait is.

..

"pacbell" <trowley@pacbell.net> wrote in message
news:hnDya.2504$wa.160062698@newssvr14.news.prodigy.com...
> Hi
> I'm looking to build a QRP rig for 40 meters. Does anyone have experience
> with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other suggestions?
>
> 73
> Tom
> KG6QPV
>
>

3539. Re: QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 18:21:03 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0305211021.5f440b19@posting.google.com>
Source record: 35442

There is absolutelyu NO comparision. The Small Wonders Labs rigs are primo.

"pacbell" <trowley@pacbell.net> wrote in message
news:<hnDya.2504$wa.160062698@newssvr14.news.prodigy.com>...
> Hi
> I'm looking to build a QRP rig for 40 meters. Does anyone have experience
> with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other suggestions?
>
> 73
> Tom
> KG6QPV

3540. LED conversion help needed for Lightsaber Toy

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 18:45:21 UTC
From: johannzimbal@yahoo.com
Message-ID: <a3bc7b40.0305211045.249f6ff6@posting.google.com>
Source record: 35443
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

I want convert a Star Wars Electronic Ligtsaber toy to use LEDs instead of the 2.5 V flashlight bulb currently in there. The goal is to get a much much brighter output.

The toy is basically just a flashlight that uses two 1.5V C cell batteries (end to end)

I bought some red Jumbo Super Bright LEDs from Radio Shack, but I'm not sure if they will end up making things brighter than the flashlight bulb in the long run.

Each LED is rated 2.4V, 20 mA, and the intensity is 5000mcd.

Hooking up the LEDs in series seems simple, and I know how to solder. I'm not sure how to hook up LEDs and resistors in parallel, so please let me know if that is the answer. I'm a bit of an electronics novice.

I'm not as concerned with battery life as I am with extreme brightness.

Thanks a lot for your help,

Johann

3541. Re: LED conversion help needed for Lightsaber Toy

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 19:02:52 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <6nincv0es5537qrr0omentlpt4hdnndt3j@4ax.com>
Source record: 35444
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 21 May 2003 11:45:21 -0700, the renowned johannzimbal@yahoo.com
(Johann Zimbal) wrote:

>Hi,
>
>I want convert a Star Wars Electronic Ligtsaber toy to use LEDs
>instead of the 2.5 V flashlight bulb currently in there. The goal is
>to get a much much brighter output.
>
>The toy is basically just a flashlight that uses two 1.5V C cell
>batteries (end to end)
>
>I bought some red Jumbo Super Bright LEDs from Radio Shack, but I'm
>not sure if they will end up making things brighter than the
>flashlight bulb in the long run.
>
>Each LED is rated 2.4V, 20 mA, and the intensity is 5000mcd.
>
>Hooking up the LEDs in series seems simple, and I know how to solder.
>I'm not sure how to hook up LEDs and resistors in parallel, so please
>let me know if that is the answer. I'm a bit of an electronics novice.
>
>I'm not as concerned with battery life as I am with extreme
>brightness.

Try about a 68 ohm resistor in series with each LED.

```
+3 -x---|>|---[68R]---x--- 0V
| |
x---|>|---[68R]---x
```

Measure the voltage across the resistor (should be around 1.36V),
calculate the current and then adjust the values to get closer to 20mA
if it's more than about 1.6V or less than about 1.1V.

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

3542. 2SC2181 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 19:50:17 UTC
From: hinet news <tomislav.kaltnecker@kr.tel.hr>
Message-ID: <bagm9p$39b2$1@as201.hinet.hr>
Source record: 35445

I am still looking for 2SC2181 transistor. I didn't find supplayer who
accept AMEX card.
Any suggestion? Anyone has it in junkbox?

Tom, 9A2TK

3543. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 20:44:07 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <hK%ya.1147$Y57.29794@newsfep1-win.server.ntli.net>
Source record: 35366

> Right, off to get hold of a new insert (wishing I had got some at the
> last rally/junk sale as they were really cheap!!)
==========
Ian , I have plenty electret mike capsules ,salvaged from telephones . Most have dimensions : dia 10 x 8 mm
1 salvaged from a mobile phone has dimensions dia 10 x 4 mm . Most have 2 connections with leads red (+) and brown (-)

I can send you 2 pcs free of charge . If you are interested please confirm your post code , which to my info is DL15 8EX as from callbook.

Frank GM0CSZ north of Scotland

3544. Re: Resist 'pen'

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 21:00:53 UTC
From: averyfineman@aol.com
Message-ID: <20030521170053.06400.00000127@mb-m10.aol.com>
Source record: 35347

In article <vcm06vdqcj9pfc@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>> Acetone is a good solvent for nearly all marker pen ink, lacquers,
>> acetate and nitrate adhesives, polyester and polystyrene, and
>> most epoxy resins used in making epoxy-fiberglass and
>> "casting plastic" things. Michael's craft stores sometimes have
>> acetone, usually have casting plastic and hardener.
>> . . .
>
>I've found acetone to be readily available at paint stores, and in the
>paint department of home-handyman stores. It's probably less expensive
>there than at craft stores.

Klean-strip products (mentioned for OSH, Orchard Supply Hardware
chain) are also carried by Home Depot. The Lowe's chain has
comparable products in their paint departments as does Do-It
Centers. Prices vary but will be about $4 a quart. Note: Not all
chain stores will stock it so it is worthwhile to visit in-person and
check it out.

For general information on acetone, the Canadian Occupational
Health and Safety page at:

http://www.ccohs.ca/oschanswers/chemicals/chem_profiles/acetone/

is a good one. My late father-in-law was a polymer chemist
specializing on paint products used in production silkscreening
and printing. [he survived nicely well into retirement by taking
precautions on the job]

On a related note, Do-It Centers in Southern California have a
surprisingly large variety of metal and plastic materials good for
homebrewing electronics. Metal bar and angle stock, threaded
rods of many sizes, punched metal sheet in various patterns for
grilles, screens as part of air-passage shielding, and so forth.
Other do-it-yourself places have similar selections of materials
worth investigating.

Len Anderson
retired (from regular hours) electronic engineer person

3545. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 21:00:54 UTC
From: averyfineman@aol.com
Message-ID: <20030521170054.06400.00000128@mb-m10.aol.com>
Source record: 35446

In article <5f5159fa.0305202305.36c920f3@posting.google.com>,
remove_ok1sip@atlas.cz (OK1SIP) writes:

>Gary S. <Idontwantspam@net> wrote in message
>news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
>> On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
>> ...Inside the vacuum portion, as mentioned earlier, some materials outgas
>> significantly and should not be used in a real vacuum. Metals, sealed
>> ceramics, and glass are the best choices inside...
>>
>Hi all,
>putting sealed wires through Pyrex glass is a hard task for an average
>ham. Most epoxy resins do not outgas much if mixed and hardened
>properly.

Not quite true for "most" epoxies. Jet Propulsion Laboratory in
Pasadena, California, has a large polymer chemistry lab and
evaluated hundreds of different epoxies having potential application
in spacecraft. Extremely few types/brands met the test for very
low outgassing. Open space is a fairly good vacuum... :-)

>They may be a perfect material for homebrew high-vacuum
>devices, even for a long-term sealing.
>Special wax, fat and cautchouc mixtures are used for temporary vacuum
>sealing, too.

Not recommended for anything needing to be pulled down to
10 to the minus 6th Torr...and that will be needed for any
sort of functioning vacuum tube/valve.

Bill Higdon's suggestion of a neon sign shop as a source of
seals sounds reasonable. That brings to mind a very few
homebrewers who are experimenting with making their own
Nixie tube numeric indicators. Since Nixies aren't made any
more (that I know of), their gas mixture is close to neon sign
pressures and might be a better start for hobby work. No
extra test equipment needed for tube/valve characteristics
since the numeric display is either on or off and the eye can
judge enough brightness for "good" or "bad" glowing.

Len Anderson
retired (from regular hours) electronic engineer person

3546. Heatsink compound for SS amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 21:42:27 UTC
From: Jim N2VX <ZZZjim_cronin@juno.comZZZ>
Message-ID: <ehsncv8ls2j1p3tb45edkaor6jv4fhe80t@4ax.com>
Source record: 35348

Hard core CPU overclockers swear by a thermal paste called "Arctic
Silver" and the reviews I've seen show it works.

Question: Has anybody tried this type of stuff in radio applications:
RF power transistors and RF power amp modules? Is all heat sink
grease equivalent for these types of applications?

73,
Jim

3547. Re: Heatsink compound for SS amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 22:50:45 UTC
From: jgboyles@aol.com
Message-ID: <20030521185045.03900.00000091@mb-m16.aol.com>
Source record: 35349

>Hard core CPU overclockers swear by a thermal paste called "Arctic
>Silver" and the reviews I've seen show it works.
>
>Question: Has anybody tried this type of stuff in radio applications:
>RF power transistors and RF power amp modules?

On the advice of a friend, I switched from regular heat sink compound to Silver thermal compound sold by Comp USA. My 8 MRF150 1200 watt SS Amp seems happy. Of course it seemed happy with the Silicone based stuff also.
There is a spec. called thermal conducitivity on this Silver stuff, and I would assume the better this spec., the better the compound.
73 Gary N4AST

3548. Re: 2SC2181 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 22:57:59 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <XvTya.936620$F1.115847@sccrnsc04>
Source record: 35350

Tom -

Too bad RF Parts does not accept AMEX.
American Express should be able to deliver a bank
draft from a California bank to RF parts
Bank Draft: drawn on a U.S. bank.
Wire Transfer: Please contact us for this information

RF Parts $ 41.65

http://www.rfparts.com/2sc.html

w9gb

"hinet news" <tomislav.kaltnecker@kr.tel.hr> wrote in message
news:bagm9p$39b2$1@as201.hinet.hr...
> I am still looking for 2SC2181 transistor. I didn't find supplayer who
> accept AMEX card.
> Any suggestion? Anyone has it in junkbox?
>
> Tom, 9A2TK
>
>

3549. Re: QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-21 23:02:39 UTC
From: pacbell <trowley@pacbell.net>
Message-ID: <iATya.3163$Ei2.162969727@newssvr13.news.prodigy.com>
Source record: 35351

Thanks for the insight - any other kits I should investigate? Wilderness SST, MFJ's QRP cub, etc?

Tom

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message news:vcnf03tmac65fd@corp.supernews.com...
> Tom
>
> In general, the Vectronics kits have tended to be a bit marginal, although
> they are cheap and widely available.
>
> The SW-40+, on the other hand, is widely respected, and there is a LOT of
> information on the net about it, including a wonderful web site by VE3DNL
> which is also on the QRP-L CD. The downside is that Dave Benson is pretty
> well swamped, so his delivery times aren't great, but you can check on his
> web site how long the wait is.
>
> ..
>
> "pacbell" <trowley@pacbell.net> wrote in message
> news:hnDya.2504$wa.160062698@newssvr14.news.prodigy.com...
> > Hi
> > I'm looking to build a QRP rig for 40 meters. Does anyone have
experience
> > with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other
suggestions?
> >
> > 73
> > Tom
> > KG6QPV
> >
> >
>
>

3550. Re: LED conversion help needed for Lightsaber Toy

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 00:34:20 UTC
From: "Michael A. Covington" <Michael@CovingtonInnovations.com>
Message-ID: <xkydnZribv8UhlGjXTWcqQ@speedfactory.net>
Source record: 35352
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Flashlight bulbs are much brighter than LEDs.

3551. Source of small diameter coax?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 00:35:57 UTC
From: k9sqg@aol.com
Message-ID: <20030521203557.09179.00000120@mb-m21.aol.com>
Source record: 35353

I'm looking for some small diameter coax, like RG-174, but with a higher power rating. Where might I find some other than a 500 foot roll?

Thanks.

Evan

3552. ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 00:57:45 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ECC2089.2020403@bellsouth.net>
Source record: 35354

It's been quite a week. Last week my house got struck by lightning. It hit the top of the chimney
and took out a piece of the stone top cap. It discombobulated the damper, came down the damper
control cable (melting it) and then came out the fireplace with a burst of EMP like a small
thermonuclar device went off in there. My computer setup is in the family room until my new
hamshack is built, and that's where the fireplace is. An epson photo printer got fried, my
computer as well. Then the surge took out two network hubs, travelling through the eithernet
it took out two other computers in the house. My 40" direct view tv still works, but the tube
was gaused and has color fringes in the corners. It can't be degaused by the sets internal circuits.
Hopefully a storng external degausing coil will fix this and we won't have to replace the CRT.
Two of the computers are now back up thanks to new motherboards and network cards,
but my computer still needs a new sound card and a scsi card. The replacement Tyan
motherboard wouldn't come up at first, I had to discharge the cmos before it would even
turn on the power supply. Weird! We will probably be finding other blow electronics
for the next few weeks. (Hey the battery powered atomic clock in the family got reset to
some other time zone! It did reset itself though).

3553. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 02:02:52 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ECC2FCC.5030106@bellsouth.net>
Source record: 35355

Gary S. wrote:
> On 21 May 2003 00:05:02 -0700, remove_ok1sip@atlas.cz (OK1SIP) wrote:
>
>
>>Gary S. <Idontwantspam@net> wrote in message
news:<aiqkcv8ocuqp1p6f3ealatmtl9756troo4@4ax.com>...
>>
>>>On Tue, 20 May 2003 14:04:27 GMT, Alan Yates <alany@ay.com.au> wrote:
>>>...Inside the vacuum portion, as mentioned earlier, some materials outgas
>>>significantly and should not be used in a real vacuum. Metals, sealed
>>>ceramics, and glass are the best choices inside...
>>>
>>
>>Hi all,
>>putting sealed wires through Pyrex glass is a hard task for an average
>>ham. Most epoxy resins do not outgas much if mixed and hardened
>>properly. They may be a perfect material for homebrew high-vacuum
>>devices, even for a long-term sealing.
>>Special wax, fat and cautchouc mixtures are used for temporary vacuum
>>sealing, too.
>>BR from Ivan
>
>
> The special wires with glass sealed around them is probably beyond a
> home workshop. Kovar is the special alloy which expands and contracts
> at the same rate as Pyrex.
>
> I am sure someone adept with glass work could recycle the existing
> passthroughs from an old tube into a new one.
>
> Good epoxy is not too bad inside a vacuum, but those other materials
> will limit how good a vacuum is possible.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

Learn glass blowing! You can get the required dumont wire
for the leadins from old broken light bulbs (the larger sizes
such as 200 or 300 watt are the best sources). The lead in

wires are pinched in a blob of molten glass.
Get a goot hot mapp gas torch and some glass rods and
experiment with melting and forming glass. You will
see how it can be done.

3554. dual fet needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 02:05:55 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ECC3083.5090605@bellsouth.net>
Source record: 35356

Anybody know of a source for a dual monolithic jfet?
(6 lead to 72 critter).

3555. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 02:45:59 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <0ceocv8qj3kckc8hsrvd23alfv159fme70@4ax.com>
Source record: 35357

On Wed, 21 May 2003 20:57:45 -0400, scharkalvin <wa2mze@bellsouth.net>
wrote:

>It's been quite a week. Last week my house got struck by lightning. It
>hit the top of the chimney
>and took out a piece of the stone top cap. It discombobulated the
>damper, came down the damper

As a positive note, though:

Only equipment got toasted, not people, and there was no fire started.
A pain in the butt, not a tragedy.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3556. Re: Heatsink compound for SS amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 02:50:30 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <pjdocvgf1jg6ci2rpnksbo91dh7gbg2bub@4ax.com>
Source record: 35358

On Wed, 21 May 2003 21:42:27 GMT Jim N2VX <ZZZjim_cronin@juno.comZZZ>
wrote:

>Hard core CPU overclockers swear by a thermal paste called "Arctic
>Silver" and the reviews I've seen show it works.
>
>Question: Has anybody tried this type of stuff in radio applications:
>RF power transistors and RF power amp modules? Is all heat sink
>grease equivalent for these types of applications?

I haven't seen the stuff, but I've seen it advertized. Is it actually
silver colored? If so, I'd be concerned that it contains electrically
conductive metal particles.

These would not be a problem in computer CPUs, where the paste is
applied to the TOP of the chip, away from the pins which are at less
than 5V. But in a power amp of any kind, where there is likely to be
tens to over a hundred volts insulated by a thin separator this seems
unwise.

If this stuff is really all insulating, then of course these concerns
are irrelevant, but then I've got to wonder if this stuff can actually
be any better than the usual stuff which even the best equipment comes
with.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

3557. Re: Heatsink compound for SS amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 03:45:46 UTC
From: **** <123@nospam.net>
Message-ID: <KJXya.5895$hy4.1235335@news2.news.adelphia.net>
Source record: 35359

From arctic silvers website http://www.arcticsilver.com/
"Negligible electrical conductivity. Arctic Silver 3 was formulated to conduct heat, not electricity. It is only electrically conductive in a thin layer under extreme compression. (While much safer than electrically conductive silver and copper greases, Arctic Silver 3 should be kept away from electrical traces, pins, and leads. The compound is slightly capacitive and could potentially cause problems if it bridged two close-proximity electrical paths.)"

I would not use it for RF applications. Use a good grade of thermal compound. All that is important is to keep the device's junction temperature with in manufacturers specifications.

"Jim N2VX" <ZZZjim_cronin@juno.comZZZ> wrote in message news:ehsncv8ls2j1p3tb45edkaor6jv4fhe80t@4ax.com...
> Hard core CPU overclockers swear by a thermal paste called "Arctic
> Silver" and the reviews I've seen show it works.
>
> Question: Has anybody tried this type of stuff in radio applications:
> RF power transistors and RF power amp modules? Is all heat sink
> grease equivalent for these types of applications?
>
> 73,
> Jim

3558. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 04:09:27 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3ECC4E6C.793AC678@rica.net>
Source record: 35360

"Gary S." wrote:

> The special wires with glass sealed around them is probably beyond a
> home workshop. Kovar is the special alloy which expands and contracts
> at the same rate as Pyrex.
>
> I am sure someone adept with glass work could recycle the existing
> passthroughs from an old tube into a new one.
>
> Good epoxy is not too bad inside a vacuum, but those other materials
> will limit how good a vacuum is possible.

Go for the slow cure kind of epoxy (Dexter Epoxi-Patch 1C is pretty
good), not the 5 minute stuff (which never gets much harder than an
old booger). After it cures over night, bake it out at about 140 to
180 degrees F for an hour or two. This is especially effective if you
can hold the inside under vacuum pump down while hot to pull out any
volatiles that are near the surface. It may not hold good vacuum for
decades, but it will do well enough for some very useful experiments
ands is much simpler than learning to become a glass blower.

--
John Popelish

3559. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 04:35:23 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1935f367a6a044d19898bd@192.168.42.131>
Source record: 35361

In article <3ECC2089.2020403@bellsouth.net>, wa2mze@bellsouth.net
says...

> It's been quite a week. Last week my house got struck by lightning. It
> hit the top of the chimney and took out a piece of the stone top cap. It
> discombobulated the damper, came down the damper control cable (melting it)
> and then came out the fireplace with a burst of EMP like a small
> thermonuclar device went off in there....

<snippety-blivets>

I'm very glad no one was hurt, and that it was only hardware that
got blasted.

Having said that, however, I cannot resist the following...

"ONE POINT TWENTY ONE GIGAWATTS???!!!"

Anyone who does not get the reference should hightail it down to
their local video rental place and find a copy of 'Back to the
Future.' ;-)

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

3560. Can somebody explain these capacitor markings?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 06:27:44 UTC
From: antispam <nospam@please.net>
Message-ID: <bahqntphl1@slb5.atl.mindspring.net>
Source record: 35362

Hi,
I salvaged some nice higher-voltage capacitors from an very large UPS.
The caps are tubular, potted, and wrapped in a bright yellow plastic
tape with printing on it. They appear to be unpolarized.

One of them, a 0.22 uf unit, has two voltages printed on it:
1500V cc
500V ca

What does this mean? Why the two voltages? Transient max vs steady max?

Another one is clearly a 1.0uf unit, of the same physical description,
though obviously larger in size. It reads:
630V-
330Vef 12.5Aef

What does this mean?

3561. Re: Heatsink compound for SS amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 07:08:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vcotqhs577om71@corp.supernews.com>
Source record: 35363

There's a technique to using heat sink compound that doesn't seem to be generally known. The difference in thermal conductivity between air and metal is many orders of magnitude. Heat sink compound is in between -- it's several orders of magnitude better than air, but several orders of magnitude worse than metal. So you want to replace air with thermal compound, but not metal. The ideal amount of compound to use is just enough to fill the tiny pits and imperfections in the metal surfaces, but no more. Any more than that, and you're doing more harm than good by making the heat unnecessarily flow through compound before reaching the metal. Use it very sparingly for the best results.

Roy Lewallen, W7EL

3562. Re: NE602 Balanced Modulator Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 07:11:32 UTC
From: la8ak.xnd@online.no
Message-ID: <3ecc09c8.281823539@news.online.no>
Source record: 35364

On 21 May 2003 00:48:52 -0700, n2cqr@clix.pt (Bill Meara) wrote:

>I'm using an NE602 as a balanced modulator in my 20 meter QRP DSB
>transceiver.
>Sort of the same design used in the Wee-Willy rig. VXO into pin 6
>(unbalanced). Audio (from an LM386 serving as mic amp) into pin 8
>(also unbalanced).
>
>I'm getting disappointing levles of carrier suppression. I don't have
>the gear to measure it accurately, but I'm getting more carrier than I
>got when I used diode modulators on earlier rigs. I estimate that the
>carrier is about 10 db below voice peaks. I should be doing better.
>
>Any thoughts on how to improve carrier suppression with the NE-602?
>I've tried reducing the signal level at pin 6. This seems to help,
>but not enough.
>
>Would it help if I used a balance (two pin) input for the VXO input?
>
>73 Bill CU2JL N2CQR
>http://planeta.clix.pt/n2cqr

What sort of balancing arrangement do you use? I increased the S042P
balance - as mixer - by over 40dB using the usual balancing potmeter

---
USA has the best democracy money can buy!

remove "postage" to reply

3563. Re: NE602 Balanced Modulator Problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 07:47:20 UTC
From: n2cqr@clix.pt
Message-ID: <97f305da.0305212347.3c90625c@posting.google.com>
Source record: 35365

"Sverre Holm \(LA3ZA\)" <la3za.0junk4me@qsl.net> wrote in message
news:<yiOya.331$Hb.7365@news4.e.nsc.no>...
> Check the Elecraft web site (www.elecraft.com) and look for the schematic
> for the KSB2 SSB option. It uses the 602 also, and has a pot to fine tune
> the carrier suppression to a better performance than the 602 does on its
> own.

Svere: Great idea! I went to the K2 site this morning and got the circuit.
I will give it a try and let you know the results. Thanks very much. 73 Bill
http://planeta.clix.pt/n2cqr

3564. Re: Can somebody explain these capacitor markings?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 08:40:41 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Nu0za.1375$Y57.36158@newsfep1-win.server.ntli.net>
Source record: 35367

> I salvaged some nice higher-voltage capacitors from an very large UPS.
> The caps are tubular, potted, and wrapped in a bright yellow plastic
> tape with printing on it. They appear to be unpolarized.
>
> One of them, a 0.22 uf unit, has two voltages printed on it:
> 1500V cc
> 500V ca
>
> What does this mean? Why the two voltages? Transient max vs steady max?
==========
The lower voltage is the AC rating ,the higher voltage the DC rating.

Frank GM0CSZ

3565. Re: LED conversion help needed for Lightsaber Toy

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 09:03:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Ou0za.1376$Y57.36158@newsfep1-win.server.ntli.net>
Source record: 35368
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

> Flashlight bulbs are much brighter than LEDs.
==========
High intensity LEDs are increasingly used for reliability ,including in
traffic lights , each having a panel of up to 225 LEDs.
I was given such a panel which happened to be defective (but not the LEDs)
These LEDs are very sensitive and start to glow at 20-30 micro-amperes
,which makes them suitable as a detector in a RF reflected power sensing
circuit (very suitable for portable QRP applications)

Frank GM0CSZ / KN6WH

3566. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 10:50:47 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BAF223C6.1B4AA%stewart@say.net>
Source record: 35369

"scharkalvin" wrote:
>
> It's been quite a week. Last week my house got struck by
> lightning. It hit the top of the chimney and took out a
> piece of the stone top cap. It discombobulated the
> damper, came down the damper control cable (melting it)
> and then came out the fireplace with a burst of EMP like a
> small thermonuclear device went off in there. (snip)

You're not the first or last to have devices damaged by lightning. It has happened to me twice and once to a friend. In my case, it hit a nearby power pole and took out the computer and laser printer. The motherboard on the computer was replaced and the laser printer was repaired by the maker (GCC Technologies) without charge.

A week after everything was repaired, lightning hit again. This time it came through the telephone line and took out the modem, computer, and laser printer again. The interior of the modem was well burned and in pieces. The modem was replaced, the motherboard replaced a second time, and GCC repaired the laser printer again without charge.

However, my problems were mild compared to what happened to a friend. Lightning hit a nearby pole and took out his television, stereo, several other household items, and nearly took out his son. His son was getting something out of the refrigerator and was thrown across the room. However, other than being dazed for a while, his injuries were limited to bruises from the cabinet he landed against.

Today, I unplug just about everything when lightning is in the area. About the only things that remain connected are the appliances and I stay away from them until the lightning has passed. Of course, my radio equipment is also fully unplugged and the antenna coax disconnected before it even enters the house.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

3567. Re: LED conversion help needed for Lightsaber Toy

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 10:50:57 UTC
From: Adam Aglionby <nws@capersville.co.uk>
Message-ID: <lY1za.270$%81.2773018@news-text.cableinet.net>
Source record: 35370
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Michael A. Covington" <Michael@CovingtonInnovations.com> wrote in message
news:xkydnZribv8UhlGjXTWcqQ@speedfactory.net...
> Flashlight bulbs are much brighter than LEDs.
>
Not that simple.......

LED efficiency is currently on a par with tungsten halogen incandescent lamps. Flashlight lamps are usually not halogen lamps, they may be boosted with a krypton gas fill which gives them brightness over lamp life.

Watt for watt an LED will be more efficient than a standard incandescent lamp in open white, compared to a krypton filled lamp probably less so.

LEDs come into their own in a couple of circumstances, where the avalable power is very low, 20mA incandescent lamps are rare.In these circumstances LEDs will offre useable light output and /or extended run time.

Where the required output colour is other than white, filtered incandescent dumps a large amount of the enrgy used as heat on the wrong side of the coulour filter. LEDs generate a single coulour from their consumption of the energy, blue being possibly the most striking example as blue output from an incandescent is very low but a blue LED is suprisingly effective.

For the OP output in milicandela is a function of beam angle , wider spread equals less mcd. Jumbo as in 10mm against 5mm LEDs are jsut a bigger package the LED chip in the middle is no bigger or brighter.

Adam

3568. Test (nt)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 12:52:25 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3ECCC809.22B2E0E1@yahoo.com>
Source record: 35371

Test

3569. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 13:20:07 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <dcjpcvstmmjnsg89c4bsaug1a8bkikh5pv@4ax.com>
Source record: 35372

On Wed, 21 May 2003 21:44:07 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> Right, off to get hold of a new insert (wishing I had got some at the
>> last rally/junk sale as they were really cheap!!)
>=============
>Ian , I have plenty electret mike capsules ,salvaged from telephones . Most
>have dimensions : dia 10 x 8 mm
>1 salvaged from a mobile phone has dimensions dia 10 x 4 mm . Most have 2
>connections with leads red (+) and brown (-)
>
>I can send you 2 pcs free of charge . If you are interested please confirm
>your post code , which to my info is DL15 8EX as from callbook.
>
>Frank GM0CSZ north of Scotland
>

Hi Frank,

That sounds great! Yes the post code you have is correct.

Thanks,

Iain (M0PCB)

3570. Re: Orchid boarding houses

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 13:26:26 UTC
From: Jim S <vespaman@sbcglobal.net>
Message-ID: <6e4za.6876$561.2084@newssvr17.news.prodigy.com>
Source record: 35373
Cross-posted to: rec.gardens.orchids,sci.electronics.basics,rec.radio.amateur.homebrew

the more you guys talk about this the more i feel the urrrrrrrrrgggggggggggg.
I Sorry dave, I cant do that dave.

HAL 9000
"Ted Byers" <r.ted.byers@sympatico.ca> wrote in message
news:Jedya.65$tj.10760@news20.bellglobal.com...
>
> "Larry Dighera" <LDighera@att.net> wrote in message
> news:0tifcvg9hf2hd7ddi4mpbpvav7qgb086l3@4ax.com...
> > On Thu, 15 May 2003 00:16:07 -0400, "Ted Byers"
> > <r.ted.byers@sympatico.ca> wrote:
> >
> > > While I can get a computer to do literally
> > >anything I want, just by writing a program to do it
> >
> > You can't get a computer to SUCCESSFULLY divide by zero. :-)
> >
> Sure you can! The precise result is infinity. Floating point arithmetic
> has two useful identities: INF and NaN. NaN is an acronym for not a
number,
> and is used whenever something realy bad happens: it just isn't useful in
> this context. INF represents infinity, and, while most FPUs will throw an
> exception with a divide by zero error, all one needs to do is catch and
> clear the exception (on Windows done by the OS and converted into a
> "structured exception"), and then set the result to INF. Of course, how
> easy or painful this is depends on what language you're using. This is
all
> very simple, although it isn't very practical. That said, dividing by
zero
> is something I generally don't want to do. In fact, I generally try to
> avoid it! In the software engineering I do, a divide by zero operation is
> generally a consequence of structural instability of a system given the
> parameters selected by the user. In such a case, it is best to test for a
> denominator of zero, and, when such a condition occurs, stop the
simulation
> or analysis and notify the user about what has happened.
>
> But I guess, in some respects, being able to get a computer to do anything
I
> want it to do is guaranteed by more than two dozen years experience
working
> with them, and thus knowing what they can and can't do, and thus
> guaranteeing that I never want a computer to do what I know they can't do.

> For example, I don't want to spend time making a computer that can speak
> English, or any other natural language, because natural language is
> multivocal (i.e. there are many examples of sentences that can have more
> than one meaning - a common tool in humour), and computers can handle only
> univocal languages. A computer can neither make nor understand a pun. Of
> course, down the road, some genius may well be able to prove to me that
what
> I had thought was impossible is both possible and practical; but that is a
> different question.
>
> > >(I can even get a computer to exhibit behaviours as complex as those of
> almost
> > >any animal; a fact which raises countless interesting philosophical
> questions we probably
> > >should avoid in this forum),
> >
> > That would be an interesting topic of discussion.
> >
> Indeed it is! I spent a large part of my second doctorate studying this
> from different perspectives: philosophy, educational psychology, cognitive
> science, software engineering, &c. But it is also a very difficult one
and
> an area where even experts seem to easily fall into error.
>
> > >I would likely be quite dangerous trying to put together a circuit of
any
> kind.
> >
> > It's not as difficult as you fear.
> >
> I hope you're right.
>
> > >Or maybe it is a question of simply never having done it before. Do
you
> know
> > >of any good reference books which would show me how?
> >
> > These authors can make learning the fundamentals of electronic
> > circuits painless:
> >
> > [snip]
> >
> > I'll cross-post this article to some of these newsgroups, and perhaps
> > we'll get some additional help in getting you started in electronic
> > circuit design:
> >
> > sci.electronics.basics,sci.electronics.design,rec.radio.amateur.homebrew
>
> Terrific. Thanks a lot. I really appreciate this.
>

> Cheers,
>
> Ted
>

3571. Re: QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 15:36:48 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0305220736.78584e97@posting.google.com>
Source record: 35374

Tom,

Another rig to consider, if you want to go mono band, is the
Wilderness Radio Norcal 40A. This rig has one of the best receivers
in this category of single band rigs. It can also be easily modified
to go the whole bucket (5W) of power.

The NC40A from Wilderness is a bit more expensive but it comes with
the case, connectors, and basically everything but a key. I would
highly suggest you get the KC-1 Keyer/Freq announcer as well.

I built this rig with the KC-1 back in 1998 and I still use it today.
It's my "go camping" rig, along with the Emtech ZM-2 antenna tuner.
The construction documentation is superb and Wilderness has fabulous
tech support...as does SW Labs.

The NC40A was designed by Wayne Burdick (now of Elecraft fame)and it's
just a great little rig.

My other "go camping" rig is a SWL 30+ for 30m operation from the
tent. It's a very nice rig, I've added a freq counter and 10 turn pot
to mine.

73

http://www.fix.net/~jparker/wilderness/nc40a.htm

I have no financial interest in either company.

"pacbell" <trowley@pacbell.net> wrote in message
news:<hnDya.2504$wa.160062698@newssvr14.news.prodigy.com>...
> Hi
> I'm looking to build a QRP rig for 40 meters. Does anyone have experience
> with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other suggestions?
>
> 73
> Tom
> KG6QPV

3572. Re: dual fet needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 17:35:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305220935.473cf70d@posting.google.com>
Source record: 35375

scharkalvin <wa2mze@bellsouth.net> wrote in message
news:<3ECC3083.5090605@bellsouth.net>...
> Anybody know of a source for a dual monolithic jfet?
> (6 lead to 72 critter).

I have bunches and gobs of them, removed from equipment and new. What characteristics do you need? Idss especially would be nice to know. If you just need one or two, I could drop them in an envelope and sent them along. IIRC, the lion's share of what I have are around 1mA Idss, and were used in DC--audio-range amplifiers. May well be fine up through HF and low VHF at least.

Cheers,
Tom

3573. Cubic R-3030A ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 19:07:03 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vcq7v03vd6btd6@corp.supernews.com>
Source record: 35376

Anone know where I can find a PC control program for this receiver?
tnx
hank wd5jfr

3574. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 19:38:20 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <MG9za.11913$lo.986157@newsread2.prod.itd.earthlink.net>
Source record: 35377

eniac wrote:
> Hi all.
>
> I'm trying to rebuild an old FM transmitter with tubes, but i don't
> have all necessary air-variable capacitor that the circuit needs.
> So i think to build some myself from scratch because i found a little
> in shops but these capacitors are very expencive.
> I would like to build some AVC with 30pf and 50pf capacitance.
> I would like to ask you for advice, ideas, or sites URLS with similar
> projects.
> As i said i haven't all necessary capacitos, the capacitors that i
> have , are builded with porcelain.
> As these capacitors will be work with RF, is it necessary to build
> with porcelain ?
> Is it ok to use PVC or similar material instead of porcelain ?
>
> Thank you.
> Eniac

Try Antique Electronics Supply out in Arizona. They got tuns of Air
variable caps in a lot of different sizes.

tubesandmore.com

That's where I go.

Adam

3575. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 21:44:58 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vcqh745sttep9a@corp.supernews.com>
Source record: 35378

Yes that triggers the old mind, it was indium because the spool box label had Indium as a major constituent and when I asked the seller what it was for he said; "Indium will wet glass (tin) so that you end up with a better seal." I wonder if salvaged wires from tubes or lamps would have enough to make it reuseable. I also wonder if the neon sign makers use anything, maybe not since the pressure up with a bit of some rare gas, at what pressure I wonder?
73
hank wd5jfr
"Gary S." <Idontwantspam@net> wrote in message
news:4aencvsegh7foi2b4hsrhegms1ujp4jmhb@4ax.com...
> On Wed, 21 May 2003 11:48:43 -0500, "Henry Kolesnik"
> <wd5jfr@oklahoma.net> wrote:
>
> >There is a special solder that will wet glass and this is used to help
seal
> >the element wires. I saw a spool at a hamfest once and looked at it
> >intently, the wire was quite soft and shiny and the main constituent
was
> >not a common metal but I can't recall it. I have a good memory but the
> >recall is gone. maybe someone will remember>
> >tnx
>
> Perhaps indium or an indium alloy?
>
> Along with a little borax as a flux, you can get solder to adhere to
> some interesting materials.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

3576. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-22 23:03:20 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ECD5738.3070401@bellsouth.net>
Source record: 35379

Dr. Anton Squeegee wrote:
> In article <3ECC2089.2020403@bellsouth.net>, wa2mze@bellsouth.net
> says...
>
>
>>It's been quite a week. Last week my house got struck by lightning. It
>>hit the top of the chimney and took out a piece of the stone top cap. It
>>discombobulated the damper, came down the damper control cable (melting it)
>>and then came out the fireplace with a burst of EMP like a small
>>thermonuclar device went off in there....
>
>
> <snippety-blivets>
>
> I'm very glad no one was hurt, and that it was only hardware that
> got blasted.
>
> Having said that, however, I cannot resist the following...
>
> "ONE POINT TWENTY ONE GIGAWATTS???!!!"
>
> Anyone who does not get the reference should hightail it down to
> their local video rental place and find a copy of 'Back to the
> Future.' ;-)
>

Ya know after seeing that movie I have never used the other
pronounciation for the
prefix 'Giga'. Drives some people nuts, but Websters lists both 'giga'
and 'jigi'
as valid.

3577. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 00:02:43 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <5ooqcv467l82f4fvjbf99dbrehqvs0b5s6@4ax.com>
Source record: 35380

On Thu, 22 May 2003 16:44:58 -0500, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>Yes that triggers the old mind, it was indium because the spool box label
>had Indium as a major constituent and when I asked the seller what it was
>for he said; "Indium will wet glass (tin) so that you end up with a better
>seal." I wonder if salvaged wires from tubes or lamps would have enough to
>make it reuseable. I also wonder if the neon sign makers use anything,
>maybe not since the pressure up with a bit of some rare gas, at what
>pressure I wonder?
>73

1) the amount of a solder actually on a wire is very small, and you
cannot remove it all easily if it is any good as a solder. Also, the
parts exposed to air will likely oxidize, which makes the job of the
flux that much harder.

2) Even when a tube is backfilled with a gas, standard practice is to
pump it down to the same high vacuum (2x10^-6 is typical), and then to
introduce a pure gas. This reduces harmful contaminants such as
oxygen, water vapor, or oil fumes. Typical pressures will vary, but
always be a small fraction of an atmosphere, say 50 to 100 milliTorr.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3578. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 00:26:13 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <FUdza.76718$rt6.28520@sccrnsc02>
Source record: 35381

It is always advisable to find out what is available off the shelf
http://www.orenelliottproducts.com/index.html

OEP is (or has been) a major supplier for Drake, Collins, Heathkit, almost
every tube amplifier manufacturer,
and many antenna tuners, etc,

OEP is providing HW-8 owners with replacement capacitors for their rigs, at
very reasonable prices, over 10 years
after Heathkit has been out of the kit business.

Check out their M73 product line.

Oren Elliott Products, Inc. is the largest domestic manufacturer of
air-dielectric variable capacitors
During World War II, we supplied the Allies with 3500 capacitors per day,
and by the end of the war our company was the world's largest producer of
air trimmers.

OEP's ability to manufacture subcomponents in-house (particularly via
flexible processes like CNC machining) enables us to produce highly
customized assemblies with short lead times at low cost. We've produced
several capacitors that don't fit into any of our standard configurations,
some built to a customer's specs, some developed jointly with customers, and
others engineered by OEP to perform electrically and mechanically to a
customer's requirements.

Some of these customized caps have been air variables made as a drop-in
replacement for other manufacturers' capacitors, matching them dimensionally
and electrically. Others have been more radical departures from our standard
line; they've included fixed air capacitors, fixed Teflon-dielectric caps,
screw-type air-dielectric trimmer caps, several screw-type
Teflon-dielectric trimmer caps, pressurized-gas-dielectric variable
capacitors, and liquid-dielectric variable capacitors.

They also produce variable inductors
http://www.orenelliottproducts.com/variable.htm

Oren Elliott Products, Inc.
P.O. Box 638
Edgerton, OH 43517
PH: 419-298-2306
Fax: 419-298-3545
e-mail: oep@bright.net

Greg, w9gb
--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"A. Trent Phillips" <atrentphillipsnojunk@yahoo.com> wrote in message
news:MG9za.11913$Io.986157@newsread2.prod.itd.earthlink.net...
> eniac wrote:
> > Hi all.
> >
> > I'm trying to rebuild an old FM transmitter with tubes, but i don't
> > have all necessary air-variable capacitor that the circuit needs.
> > So i think to build some myself from scratch because i found a little
> > in shops but these capacitors are very expencive.
> > I would like to build some AVC with 30pf and 50pf capacitance.
> > I would like to ask you for advice, ideas, or sites URLS with similar
> > projects.
> > As i said i haven't all necessary capacitos, the capacitors that i
> > have , are builded with porcelain.
> > As these capacitors will be work with RF, is it necessary to build
> > with porcelain ?
> > Is it ok to use PVC or similar material instead of porcelain ?
> >
> > Thank you.
> > Eniac
>
> Try Antique Electronics Supply out in Arizona. They got tuns of Air
> variable caps in a lot of different sizes.
>
> tubesandmore.com
>
> That's where I go.
>
> Adam
>

3579. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 00:39:22 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3ECD6DBA.23F59F36@nf.sympatico.ca>
Source record: 35382

scharkalvin wrote:
>
> Dr. Anton Squeegee wrote:
> > In article <3ECC2089.2020403@bellsouth.net>, wa2mze@bellsouth.net
> > says...
> >
> >
> >>It's been quite a week. Last week my house got struck by lightning. It
> >>hit the top of the chimney and took out a piece of the stone top cap. It
> >>discombobulated the damper, came down the damper control cable (melting it)
> >>and then came out the fireplace with a burst of EMP like a small
> >>thermonuclar device went off in there....
> >
> >
> > <snippety-blivets>
> >
> > I'm very glad no one was hurt, and that it was only hardware that
> > got blasted.
> >
> > Having said that, however, I cannot resist the following...
> >
> > "ONE POINT TWENTY ONE GIGAWATTS???!!!"
> >
> > Anyone who does not get the reference should hightail it down to
> > their local video rental place and find a copy of 'Back to the
> > Future.' ;-)
> >
>
> Ya know after seeing that movie I have never used the other
> pronounciation for the
> prefix 'Giga'. Drives some people nuts, but Websters lists both 'giga'
> and 'jigi'
> as valid.

Is that Guy-ger? or Gigger?
i.e. is the 'i' pronounced 'long' as in the word hide? e.g.
Gyger-hertz.
This sounds more "igh class like you know, what?"
Or is it pronounced 'short' as in the word hid? Giga-hertz.
Just curious?
Terry. Ex scouser.

3580. Re: ZAP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 01:04:25 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <d9sqcvg6nvjp1dasoobmrplq6rf6sjpnn1@4ax.com>
Source record: 35383

On Thu, 22 May 2003 22:09:22 -0230, Terry <tsanford@nf.sympatico.ca>
wrote:

>> Ya know after seeing that movie I have never used the other
>> pronounciation for the
>> prefix 'Giga'. Drives some people nuts, but Websters lists both 'giga'
>> and 'jigi'
>> as valid.
>
>Is that Guy-ger? or Gigger?
>i.e. is the 'i' pronounced 'long' as in the word hide? e.g.
>Gyger-hertz.
>This sounds more "igh class like you know, what?"
>Or is it pronounced 'short' as in the word hid? Giga-hertz.
>Just curious?
>Terry. Ex scouser.

I have heard it only with the second one, the short i sound. Both the
hard and soft G from various people.

Not sure what the Brits do, they pronounce many words differently from
we Americans. The Canadians are somewhere in between.

Everyone got used to Mega. Now it's Giga. Soon Tera.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3581. MFJ QRP rig Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 02:37:33 UTC
From: ku4uvham@aol.com
Message-ID: <20030522223733.20276.00000125@mb-m01.aol.com>
Source record: 35384

I have been thinking about getting into QRP operating for some time now and was considering the MFJ 9040. I don't really have the time or equipment to sit down and build a kit, so the 9040 seems like a logically choice, and it is within my budget. The thing that concerns me is MFJ's quality control with these radios. I have read reviews that say the radios drift quite a bit and have had other problems. I was wondering if anyone else has bought one of theses rigs recently, and whether or not MFJ has ever got around to fixing some of the problems with the radio. Please e-mail me and let me know your thoughts.

73,
Mike KU4UV

3582. Re: MFJ QRP rig Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 03:33:22 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <6Egza.702534$Zo.149051@sccrnsc03>
Source record: 35385

Go the Elecraft web site, select a builder in you area, and have an Elecraft built for
yourself. There a number of builders -- who just like to build the kits !!

The K1 is about the same price as the 9040 and more flexible (bands) and the quality is the builder you choose --
and there are a number of top builders available.

The K2 gives you expansion capabilities you can grow into (voice, power, tranverters)

GB

--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"ku4uv" <ku4uvham@aol.com> wrote in message
news:20030522223733.20276.00000125@mb-m01.aol.com...
> I have been thinking about getting into QRP operating for some time now and was
> considering the MFJ 9040. I don't really have the time or equipment to sit
> down and build a kit, so the 9040 seems like a logically choice, and it is
> within my budget. The thing that concerns me is MFJ's quality control with
> these radios. I have read reviews that say the radios drift quite a bit and
> have had other problems. I was wondering if anyone else has bought one of
> theses rigs recently, and whether or not MFJ has ever got around to fixing some
> of the problems with the radio. Please e-mail me and let me know your
> thoughts.
>
> 73,
> Mike KU4UV

3583. IR repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 03:46:32 UTC
From: Joel <joel@cyberbest.com>
Message-ID: <OQgza.2712$Lu1.848838785@twister2.starband.net>
Source record: 35386

I have my house wired with coax and a modulator to allow all the TV's in the house to use the DirecTV satellite. We have two receivers (his and Hers) and two remotes. She watches the TV on channel 20 and my channel is 30. The modulator puts the two satellite receivers on those two channels and the locals on the normal channels. This all works great. To allow us to change channels in any room, we have a few RCA D935 IR repeaters sprinkled around the house. They pick up the IR signal and transmit it to the remote receivers and this also worked well for a few years. But now the IR repeaters are starting to get flakey. We are down to just a few working. With all that said, I was wondering if anyone had either a schematic for these units or other ideas of how to do the IR repeating. I 'think' the problem is the IR transmitters are drifting off frequency as I can make one work for a few months by bending the little loop of the oscillator. I can't seem to measure the frequency it transmits at, so I can't set it to any standard frequency. I was thinking of building my own rf transmitter to replace that portion of the ckts. But maybe you guys have a batter idea or even a ckt or two that would work.

Joe Loucka AG4QC

3584. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 11:34:05 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <pQnza.1659$og3.64477@newsfep1-win.server.ntli.net>
Source record: 35387

> That sounds great! Yes the post code you have is correct.
>
> Thanks,
=========
Iain , I have mailed to you 2 electret capsules . Good Luck.

Frank GM0CSZ / KN6WH

Apology to group for posting private mail through this NG ; due to lack of correct e-mail address.

Fr

3585. Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 12:11:32 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0305230411.1b24930c@posting.google.com>
Source record: 35388

I'm not much better than a novice in the field of radio, but because of a project I'm involved in, I'm hoping to find a potential transmitter solution.

Let me pose the question this way: for an airborne system approaching 100,000ft, what are possible transmitters/frequencies/modulation-type solutions I could use that would be capable of transmitting an audio signal to a ground receiver, approximately 40 miles away (plus the 20 miles delta 'h').

In addition, I'm working with a limited budget, have a total payload capacity on the order of 2kg or less, and am not licensed.

Any suggestions? :-)

Thanks in advance for advice anyone can provide!

Dave

3586. Re: MFJ QRP rig Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 12:29:47 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3ECE135E.6C638AFA@gte.net>
Source record: 35389

ku4uv wrote:

> I have been thinking about getting into QRP operating for some time now and was
> considering the MFJ 9040. I don't really have the time or equipment to sit
> down and build a kit, so the 9040 seems like a logically choice, and it is
> within my budget. The thing that concerns me is MFJ's quality control with
> these radios. I have read reviews that say the radios drift quite a bit and
> have had other problems. I was wondering if anyone else has bought one of
> theses rigs recently, and whether or not MFJ has ever got around to fixing some
> of the problems with the radio. Please e-mail me and let me know your
> thoughts.
>
> 73,
> Mike KU4UV

The advice to have an Elecraft built for you is excellent. Their designs (and quality) are the very best out there (including the offshore stuff), and light years ahead of anything MFJ will ever come out with.

Dale W4OP

3587. Re: Elecraft Builders - web link

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 12:53:46 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <uRoza.946769$3D1.543266@sccrnsc01>
Source record: 35390

Elecraft builders in the USA .. and around the world
http://www.elecraft.com/k2_builders.htm

Find another current production company in amateur radio with this depth of
support
(Hint: Collins no longer has amateur equipment in active production)
--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"ku4uv" <ku4uvham@aol.com> wrote in message
news:20030522223733.20276.00000125@mb-m01.aol.com...
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> considering the MFJ 9040. I don't really have the time or equipment to
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> theses rigs recently, and whether or not MFJ has ever got around to fixing
some
> of the problems with the radio. Please e-mail me and let me know your
> thoughts.
>
> 73,
> Mike KU4UV

3588. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 12:57:17 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3ECE1A90.4070302@invalid.invalid>
Source record: 35391

David Harper wrote:
> I'm not much better than a novice in the field of radio, but because
> of a project I'm involved in, I'm hoping to find a potential
> transmitter solution.
>
> Let me pose the question this way: for an airborne system
> approaching 100,000ft, what are possible
> transmitters/frequencies/modulation-type solutions I could use that
> would be capable of transmitting an audio signal to a ground receiver,
> approximately 40 miles away (plus the 20 miles delta 'h').
>
> In addition, I'm working with a limited budget, have a total payload
> capacity on the order of 2kg or less, and am not licensed.
>
> Any suggestions? :-)

What's the purpose of the information being transmitted? Are you in the U.S.?

It might prove easiest to obtain an amateur radio license and use ham frequencies. There are limitations on the purpose of communications that's permitted on the amateur bands, but if your purpose is non-commercial scientific curiousity you should be fine.

Amateurs *have* done this kind of communications.

--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3589. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 14:17:28 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <Y3qza.957170$F1.117506@sccrnsc04>
Source record: 35392

IF we knew more about you desire "challenge" .... better information could be provided, otherwise at this stage of your

inquiries I would suggest "google.com" for research and education purposes.

There is an enormous amount of information available on the web regarding high-altitude ballooning and APRS based experiments.

Below is a list of interesting and/or useful sites which have quickly made their way to my favorites list.

a.. Reno County Kansas Amateur Radio Association (RCKARA) - www.rckara.org. This is our group's website. We try to keep it as up-to-date as possible regarding our ballooning activities.

b.. Tucson Amateur Packet Radio (TAPR) - www.tapr.org. This group of amateurs is dedicated to the development of new digital technologies.

c.. Kansas Near Space Project (KNSP) - www.ksu.edu/humec/knsp/knsp.htm. I don't think this site is being updated any more, but they have a lot of good information and photos on the site.

d.. Treasure Valley Near Space Project (TVNSP) - www.the-one.com/tvnsp. Paul Verhage (KD4STH) who initially got our group started has moved north and is now involved with the TVNSP.

e.. Nebraska Stratospheric Amateur Radio (NSTAR) - www.members.home.net/mconner1/nstar.html. A group of amateur's near Omaha, Nebraska.

f.. Edge of Space Sciences (EOSS) - www.eoss.org. A very active balloon group in Colorado. They have done a number of flights with ATV on board with satisfactory results.

g.. High Altitude Glider Project - members.shaw.ca/sonde/index.htm. A Canadian who essentially built a radio controlled glider the flies home guided by GPS. Many of the same technologies as the ballooners are used on it.

h.. Findu.com - www.findu.com. This is a website that collects APRS information from various gateway located across the country and posts them to this website. A typical balloon flight will find its way onto this site because of the range from which the balloon can be heard.

i.. Microchip - www.microchip.com. This is the supplier of the PIC chips. They have a lot of information on their site about their chips.

j.. Custom Computer Services (CCS) - www.ccsinfo.com. The maker of the C compiler that I use. Because of its price, it is well known in amateur circles.

k.. DonTronics - www.dontronics.com. A provider of the WARP-13 PIC programmer that I used to develop this project

--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"David Harper" <achilles03@hotmail.com> wrote in message news:fef44ceb.0305230411.1b24930c@posting.google.com...
> I'm not much better than a novice in the field of radio, but because
> of a project I'm involved in, I'm hoping to find a potential
> transmitter solution.
>
> Let me pose the question this way: for an airborne system
> approaching 100,000ft, what are possible
> transmitters/frequencies/modulation-type solutions I could use that
> would be capable of transmitting an audio signal to a ground receiver,
> approximately 40 miles away (plus the 20 miles delta 'h').
>
> In addition, I'm working with a limited budget, have a total payload
> capacity on the order of 2kg or less, and am not licensed.
>
> Any suggestions? :-)
>
> Thanks in advance for advice anyone can provide!
>
> Dave

3590. parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 17:48:31 UTC
From: Lou <Tech@DP.NET>
Message-ID: <balmud$o2b$1@news.dp.net>
Source record: 35393

numerous parts and items available for home brew. trying to clear some stuff out in anticipation of moving.

--
Looking for something? Request our list. Flea Market/Hamfest specials.

C.L. FURLONG ENTERPRISES
514 Railroad St.
P.O. Box 289
Stockdale, PA 15483
Phone: 724-938-7808
E-Mail: Lou/Tech@DP.NET

Electronics Plus: 2 way, Ham, CB, sales - service, cables, components, FCC licenses and exams.
Gifts and more: Gift items, promo items, Fund Raisers and more.

Cash, Check (must clear), Money Orders. Sell via Shop, online - Newsgroups/E-Bay

3591. Re: dual fet needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 18:21:10 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3ece669b$0$48908$edfadb0f@dtext02.news.tele.dk>
Source record: 35394

Hello

> Anybody know of a source for a dual monolithic jfet?
> (6 lead to 72 critter).

I have some 2N3922 to spare.

Regards Max

3592. 450ohm Ladder-line rolle up J-pole question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 18:22:24 UTC
From: Jeff <kb1hol@REMOVETHIS.arrl.net>
Message-ID: <kb1hol-E30CF8.14222423052003@news.mindspring.com>
Source record: 35395

Hello!

I have constructed a roll up J-pole antenna from 450ohm ladder line for
2 meters. It works quite well with a 1.4-1.2 SWR across the bandwidth.

My question is what are the power limits for this antenna? I have seen
that the same antenna made with 300ohm "twin lead" is suggested to keep
under 10 watts on VHF. What about the heavier 450ohm ladder line that
I've made this antenna with? Could it handle 25 watts? What about 65W?

I've got a Yaesu FT-2800 2 meter TXR that I'd love to pair it with since
I live in an apartment with no method of installing an external antenna.
Likewise, a 1/4 wave 2M groundplane is impractical in our livingspace.
The J-pole can happily be hung in the corner of our bedroom near the
window with no fuss (and no complaints from my other half! :)

Thank you!

73s
Jeff
KB1HOL/AG
--
--
J. Rogers KB1HOL
KB1HOLatARRLdotNET

3593. (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 18:44:39 UTC
From: mikea@mikea.ath.cx
Message-ID: <balq6n$j7g$12@puck.litech.org>
Source record: 35396

I'm hoping to copy the programming from the three 2708 EPROMs
in my DEBEG 2000 HF receiver, Just In Case, and am looking for
three 2708 EPROMs or their electrical and pinout equivalents.

Under US$10 would be good.

--
All children should be aptitude-tested at an early age and, if their
main or only aptitude is for marketing, drowned.
-- David Canzi, news.admin.net-abuse.email, 2001-03-21

3594. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 18:47:21 UTC
From: antispam <nospam@please.net>
Message-ID: <balqc9$t9a$1@slb0.atl.mindspring.net>
Source record: 35297

Gary:

Are you quoting pressures for neon tubes, or radio tubes? If you mean
radio tubes, I think the pressure values you quote are way off. As I
understand it, the vacuum values should be at least a 100 times better.

At one time, gassy triodes were manufactured for use as detectors, but
in most other cases, any gas present in the envelope is a liability. Gas
ionizes, which limits the operating voltage of the tube. Also, gas
molecules can cause deterioration of the filament, and internal short
circuits due to the effects of sputtering.

Gary S. wrote:

>On Thu, 22 May 2003 16:44:58 -0500, "Henry Kolesnik"
><wd5jfr@oklahoma.net> wrote:
>
>
>
>>Yes that triggers the old mind, it was indium because the spool box label
>>had Indium as a major constituent and when I asked the seller what it was
>>for he said; "Indium will wet glass (tin) so that you end up with a better
>>seal." I wonder if salvaged wires from tubes or lamps would have enough to
>>make it reuseable. I also wonder if the neon sign makers use anything,
>>maybe not since the pressure up with a bit of some rare gas, at what
>>pressure I wonder?
>>73
>>
>>
>
>1) the amount of a solder actually on a wire is very small, and you
>cannot remove it all easily if it is any good as a solder. Also, the
>parts exposed to air will likely oxidize, which makes the job of the
>flux that much harder.
>
>2) Even when a tube is backfilled with a gas, standard practice is to
>pump it down to the same high vacuum (2x10^-6 is typical), and then to
>introduce a pure gas. This reduces harmful contaminants such as
>oxygen, water vapor, or oil fumes. Typical pressures will vary, but
>always be a small fraction of an atmosphere, say 50 to 100 milliTorr.
>
>Happy trails,
>Gary (net.yogi.bear)
>---
>at the 51st percentile of ursine intelligence

>
>Gary D. Schwartz, Needham, MA, USA
>Please reply to: garyDOTschwartzATpoboxDOTcom
>
>

3595. Re: 450ohm Ladder-line rolle up J-pole question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 20:21:26 UTC
From: j999w@aol.com
Message-ID: <20030523162126.20945.00000211@mb-m27.aol.com>
Source record: 35298

This line is good for a KW at HF. Guessing that 100+ watt range for 2m should be safe.

jw
wb9uai

3596. Re: ½" x 6" Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 20:23:39 UTC
From: j999w@aol.com
Message-ID: <20030523162339.20945.00000212@mb-m27.aol.com>
Source record: 35299

>
>> Wanted:
>> Half inch diameter ferrite rods. Must be at least six inches long.
>> Willing to pay good money. I'm in Sheffield, UK. Please telephone
>> Peter Tankard on 07931 463823 (mobile) from 0900 to 2200.

Watch eBay. Bought a bunch of 9 inchers last year.

jw
wb9uai

3597. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 20:36:59 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <j51tcvop5pourf9gq2na3844d62itbgtac@4ax.com>
Source record: 35300

On Fri, 23 May 2003 11:47:21 -0700, antispam <nospam@please.net>
wrote:

>Gary:
>
>Are you quoting pressures for neon tubes, or radio tubes? If you mean
>radio tubes, I think the pressure values you quote are way off. As I
>understand it, the vacuum values should be at least a 100 times better.
>
>At one time, gassy triodes were manufactured for use as detectors, but
>in most other cases, any gas present in the envelope is a liability. Gas
>ionizes, which limits the operating voltage of the tube. Also, gas
>molecules can cause deterioration of the filament, and internal short
>circuits due to the effects of sputtering.
>
I was meaning the neon tubes, as that was what he mentioned. It is
also the general pressure range for most plasma systems, which is
another way to describe a neon tube.

The other point was that was that even though the ending pressure is
higher, tubes are pumped down to a better vaccum before the neon or
whatever is added, to reduce impurities.

I have worked with tube-type pressure sensors for measuring vacuum,
which are essentially basic vacuum tubes where the efficiency is a
measure of the vacuum.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3598. WTD: Large Hallicrafters type knob:

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 20:43:55 UTC
From: yardleyite@aol.com
Message-ID: <20030523164355.09704.00000185@mb-m26.aol.com>
Source record: 35302

Greetings all,
Would anyone have a 3" diamater Hallicrafters type (looks
like the spoked tuning knobs on an SX-28 but 3" instead of 1" diameter) knob
with a pointer; for sale?
If so, please advise.

Thanks for the bandwidth.
Mod-U-Later,
Joe Cro N3IBX

3599. Re: Checking an Electret Microphone insert...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 20:44:08 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <nv1tcvolvlmo8soe68nmnc1tsft9vk372s@4ax.com>
Source record: 35301

On Fri, 23 May 2003 12:34:05 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> That sounds great! Yes the post code you have is correct.
>>
>> Thanks,
>=========
>Iain , I have mailed to you 2 electret capsules . Good Luck.
>
>Frank GM0CSZ / KN6WH
>
>
>
>Apology to group for posting private mail through this NG ; due to lack of
>correct e-mail address.
>
>Fr
>

Thanks, I look forward to receiving them. I'm sure the group don't
mind.. I don't... :-)

Regards,

73 Iain M0PCB

3600. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 22:20:29 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <W5OdnV1ZmYR7A1Oj4p2dnA@ctc.net>
Source record: 35303

> I'm not much better than a novice in the field of radio, but because
> of a project I'm involved in, I'm hoping to find a potential
> transmitter solution.
>
> Let me pose the question this way: for an airborne system
> approaching 100,000ft, what are possible
> transmitters/frequencies/modulation-type solutions I could use that
> would be capable of transmitting an audio signal to a ground receiver,
> approximately 40 miles away (plus the 20 miles delta 'h').
>
> In addition, I'm working with a limited budget, have a total payload
> capacity on the order of 2kg or less, and am not licensed.
>
> Any suggestions? :-)
>

Get a pair of the personal radios that sell for around $ 50 or so a pair.
They have enough power to get that range from 100,000 feet and operate
about 460 mhz.FM.
It will not take much power at that height. I have talked to other hams in
airplanes that were at 40,000 feet and they were only using about 5 watts or
less.

3601. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 23:12:52 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <4gatcvgpjjirguvbdfa0sotrjfn3jeqd14@4ax.com>
Source record: 35305

On Fri, 23 May 2003 23:42:17 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>On Fri, 23 May 2003 20:36:59 GMT, Gary S. <Idontwantspam@net> wrote:
>
>>I have worked with tube-type pressure sensors for measuring vacuum,
>>which are essentially basic vacuum tubes where the efficiency is a
>>measure of the vacuum.
>
>Is it right to assume this home-blown technique is best suited to
>producing high power valves? Let's face it: the small signal tubes
>have very tiny internals not suitable for home replication. They're
>also dirt-cheap, in the main so not worth emulating. I recall around
>about 1980 I had the privelege of being shown around the BBC's World
>Service and saw some 50kW output tubes there. They were each the size
>of a soccer ball and the final PA used a bunch of 'em paralleled up to
>achieve the 1MW DC input power the station ran at typically. I'd have
>thought the enthusiastic amateur glass-blower would have a great deal
>of fun making up some of those.

Just like working on UHF and higher frequencies gets difficult because
of tight tolerances and tiny parts, small tubes are going to be more
difficult.

High power is something you want to be careful with until you know
what you are doing. As with anything homemade, you need to test
carefully before cranking it up. There's a reason they call them
KILL-ovolts and KILL-owatts.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3602. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-23 23:48:03 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <bambvj$1vh$1@freenet9.carleton.ca>
Source record: 35306

"Ralph Mowery" (rmowery@ctc.net) writes:
>> I'm not much better than a novice in the field of radio, but because
>> of a project I'm involved in, I'm hoping to find a potential
>> transmitter solution.
>>
>> Let me pose the question this way: for an airborne system
>> approaching 100,000ft, what are possible
>> transmitters/frequencies/modulation-type solutions I could use that
>> would be capable of transmitting an audio signal to a ground receiver,
>> approximately 40 miles away (plus the 20 miles delta 'h').
>>
>> In addition, I'm working with a limited budget, have a total payload
>> capacity on the order of 2kg or less, and am not licensed.
>>
>> Any suggestions? :-)
>>
>
> Get a pair of the personal radios that sell for around $ 50 or so a pair.
> They have enough power to get that range from 100,000 feet and operate
> about 460 mhz.FM.
> It will not take much power at that height. I have talked to other hams in
> airplanes that were at 40,000 feet and they were only using about 5 watts or
> less.
>
>
But, is this gizmo going to stay up at that height? If the transmitter
is in part there for retrieving the gizmo, it drops down to earth and
you use direction finding to locate it, then the distance that comes with
that height above ground is lost. If it's just for in flight telemetry,
then your solution is fine. But there may be problems if it's there to
locate it after the crash or whatever.

Michael VE2BVW

3603. Re: 450ohm Ladder-line rolle up J-pole question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 00:08:41 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <jPyza.197$kj2.33721@newsfep1-win.server.ntli.net>
Source record: 35307

"J999w" <j999w@aol.com> wrote in message
news:20030523162126.20945.00000211@mb-m27.aol.com...
> This line is good for a KW at HF. Guessing that 100+ watt range for 2m
should
> be safe.
==========
However ,at 100 + watts ,with the J-pole antenna installed in a room , and
with humans present in that room ,prolonged RF exposure would NOT be
recommended. Check permissible exposure levels especially at VHF
frequencies.
Another potential problem with (high) RF power radiated indoors is
interference to other nearby electronic equipment.

Frank GM0CSZ / KN6WH

3604. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 00:58:45 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <73gtcvk97jgp02ngfvbqvubp60r9s8s679@4ax.com>
Source record: 35308

On Fri, 23 May 2003 23:42:17 -0700 Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>Is it right to assume this home-blown technique is best suited to
>producing high power valves? Let's face it: the small signal tubes
>have very tiny internals not suitable for home replication. They're
>also dirt-cheap, in the main so not worth emulating. I recall around
>about 1980 I had the privelege of being shown around the BBC's World
>Service and saw some 50kW output tubes there. They were each the size
>of a soccer ball and the final PA used a bunch of 'em paralleled up to
>achieve the 1MW DC input power the station ran at typically. I'd have
>thought the enthusiastic amateur glass-blower would have a great deal
>of fun making up some of those.

As commercial transmitters go, I think those were pretty small ones.
Right now I've got a set of 4 Machlett water cooled tetrodes that each
weigh 130 lbs. They are rated at 175kW continuous each. We're using
them in pairs to make 2 push-pull pulsed amplifiers that will put out
over 2MW each for 50 milliseconds.

Just for comparison, each of these tubes takes 6kW of filament power.

And these are not nearly the largest power tubes available.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

3605. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 03:37:36 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0305231937.476948e5@posting.google.com>
Source record: 35309

Doug Smith W9WI <w9wi@invalid.invalid> wrote in message
news:<3ECE1A90.4070302@invalid.invalid>...
> David Harper wrote:
> > I'm not much better than a novice in the field of radio, but because
> > of a project I'm involved in, I'm hoping to find a potential
> > transmitter solution.
> >
> > Let me pose the question this way: for an airborne system
> > approaching 100,000ft, what are possible
> > transmitters/frequencies/modulation-type solutions I could use that
> > would be capable of transmitting an audio signal to a ground receiver,
> > approximately 40 miles away (plus the 20 miles delta 'h').
> >
> > In addition, I'm working with a limited budget, have a total payload
> > capacity on the order of 2kg or less, and am not licensed.
> >
> > Any suggestions? :-)
>
> What's the purpose of the information being transmitted? Are you in the
> U.S.?
<snip>

Yes, I'm in the U.S. The information is GPS data for a high altitude
balloon project. The interfacing of the GPS module to the
microprocessor and the parsing of data from the GPS output is
straight-forward enough, however I'm just not sure about how to
transmit this data back to ground. :-) I think the simplest way
would be to include in the control program a routine to send a morse
code type beeping via 'the transmitter' indicating lat, long, and alt.
I'm sure there's better ways, but I'm still new to radio. :-)

>
> It might prove easiest to obtain an amateur radio license and use ham
> frequencies. There are limitations on the purpose of communications
> that's permitted on the amateur bands, but if your purpose is
> non-commercial scientific curiousity you should be fine.
>
> Amateurs *have* done this kind of communications.

Ok, novice question... how does one go about obtaining an amateur
radio license and where can I get study material/info on it?

Thanks again for your advice!

Dave

3606. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 04:05:20 UTC
From: mikea@mikea.ath.cx
Message-ID: <bamr20agc1@puck.litech.org>
Source record: 35310

David Harper <achilles03@hotmail.com> wrote:

> Ok, novice question... how does one go about obtaining an amateur
> radio license and where can I get study material/info on it?

<http://www.arrl.org> is a really, really good start.

--
...most SF writers are small blokes; they spent a lot of time grubbing
around on the floor for old SF mags, not stretching up to the top shelf for
pornography...As an aside, Douglas Adams is quite tall -- Terry Pratchett

3607. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 06:42:17 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <rg3ucvg0gbjk0kqjue484eun9qugg419k6@4ax.com>
Source record: 35304

On Fri, 23 May 2003 20:36:59 GMT, Gary S. <Idontwantspam@net> wrote:

>I have worked with tube-type pressure sensors for measuring vacuum,
>which are essentially basic vacuum tubes where the efficiency is a
>measure of the vacuum.

Is it right to assume this home-blown technique is best suited to producing high power valves? Let's face it: the small signal tubes have very tiny internals not suitable for home replication. They're also dirt-cheap, in the main so not worth emulating. I recall around about 1980 I had the privelege of being shown around the BBC's World Service and saw some 50kW output tubes there. They were each the size of a soccer ball and the final PA used a bunch of 'em paralleled up to achieve the 1MW DC input power the station ran at typically. I'd have thought the enthusiastic amateur glass-blower would have a great deal of fun making up some of those.

3608. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 06:59:02 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000070.0016bec9@btinternet.com>
Source record: 35311

Hi,

You could do a Google search with radio (NOT wireless)
and telemetry as the key words. This kind of stuff is old
hat - way back to WWII, so you should find plenty of
references. The gear that is used to track animal movements
may also be something like what you are looking for.

Cheers - Joe

3609. Homebrew valve CW/DSB transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 09:34:15 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3ecf3a5e.10866484@news.freeserve.co.uk>
Source record: 35312

Hi
I'm just about to start a long awaited valve project, its
a valve CW QRP transmitter with a simple Double Sideband
modulator, the original design was from the Sprat magazine
it was called the DSB1 by G3YUQ, I'd love to hear from anyone
that built this or knows anything about it, or even fancies a
go at building it now!
cheers from Ron G3YUH ronayling@hotmail.com

3610. Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 09:44:15 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <0kfucv8ol3nrg9doaued7vk3g90frm1iaa@4ax.com>
Source record: 35313

Hi.

Does anyone know the formula for drawing out a single petal for parabolic dish at all ?

Clive

3611. Surplus Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 12:27:21 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <YnJza.19$V4.924@news.iquest.net>
Source record: 35318
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

```
Junkbox Surplus Parts for Sale as of 05/24/2003
===============================================

I have 200 excess pcs of 5.000 Mhz crystals. These are the miniture
crystals like you see in the latest QRP Quarterly. Tiny round
crystals with two wire leads, I think I've seen these in watches. If
we ever get 60m these could be a lot of fun.
50 for $4.00 shipped to the USA.

I have 400 pcs of 102J (1000pf) Shinyei ceramic caps rated at 630
VDC. These are in bags of 200.
$5.50 for 200 including USA shipping.

I have surplus 50K 1 Turn linear taper pots, about 25 each. These
are chassis mount pots with the nut. About the size of a nickle, and
about 1/2 inch deep with a 1/4 inch shaft about 1/2 inch long.
5 for $5.00 including USA shipping.

2.5/5.5mm Coaxial Power Jacks for PCB insertion or Manhattan install
10 for $2.50

285pf Green Square Plastic Cap, PC Board Insertion 10%
100 for $4.00

220pf 5% 63V SMD Caps - Surface Mount size is 0806
50 for $1.00 PLUS you must send a SASE for return.

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
```

and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==========
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7 100/$30
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$8.00
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4

Op AMPS
==========
LM386N-1 - Audio Amps 5 for $3.00

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $3.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--
==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

3612. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 12:30:57 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <6cnucvo6m8212cedd2pi3eg59elvpu22ua@4ax.com>
Source record: 35319

On Sat, 24 May 2003 11:48:39 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>Indeed. I wasn't trying to suggest the World Service tubes were
>anything in that league. In fact it surprised me even at that time
>that the station ran on such a modest power level, given what they
>expected from it. I can't recall how much VoA puts out, but I'm sure
>it dwarfs the WS by some order of magnitude. Anyone know?

I took a quick look at the voa.gov site.

A typical transmitter is 100,000 watts, although they use a great
variety on many different frequencies. With the right antenna design,
they are getting over 1,200,000 watts ERP in the direction they wish.

As a reference, WBZ 1030 AM broadcast in my area puts out 50,000 watts
on a clear channel at night and claims coverage of 38 states and
several provinces.

Commercial TV stations put out far more power, though. 600,000 to
1,000,000 watts is typical for larger stations.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3613. Re: Novice transmitter challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 12:44:03 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <tgpucv0ijk5euvuup4no6j1evucttlvfr1@4ax.com>
Source record: 35320

On Sat, 24 May 2003 04:05:20 +0000 (UTC), mikea@mikea.ath.cx (Mike Andrews) wrote:

>David Harper <achilles03@hotmail.com> wrote:
>
>> Ok, novice question... how does one go about obtaining an amateur
>> radio license and where can I get study material/info on it?
>
><http://www.arrl.org> is a really, really good start.

Specifically http://www.arrl.org/hamradio.html gives all the details on getting started.

The current entry level license is Technician. It requires passing a 35 question multiple choice exam, but Morse Code is not required for this one. Their book "Now You're Talking" will help you learn the material and pass the test.

Other hams have done what you want to do, so it may well be worthwhile to find some of them.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3614. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 13:59:36 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <g9UiwaAIr3z+EA$d@ifwtech.co.uk>
Source record: 35321

Paul Burridge wrote:
>
>Is it feasible to build one for this sort of frequency? What would be
>the approximate dimensions? Anyone care to offer an educated guess?

About (2450/500) = 4.9 times the size of the one in your microwave oven
- and approaching 4.9-cubed times the weight.

Finding a suitable permanent magnet might be fun. Getting it out of the
car might be even more fun...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3615. Re: 450ohm Ladder-line rolle up J-pole question!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 15:58:33 UTC
From: Jeff <kb1hol@REMOVETHIS.arrl.net>
Message-ID: <kb1hol-8FDE96.11583324052003@news.mindspring.com>
Source record: 35322

In article <jPyza.197$kj2.33721@newsfep1-win.server.ntli.net>,
"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote:

> "J999w" <j999w@aol.com> wrote in message
> news:20030523162126.20945.00000211@mb-m27.aol.com...
> > This line is good for a KW at HF. Guessing that 100+ watt range for 2m
> should
> > be safe.
> ==========
> However ,at 100 + watts ,with the J-pole antenna installed in a room , and
> with humans present in that room ,prolonged RF exposure would NOT be
> recommended. Check permissible exposure levels especially at VHF
> frequencies.
> Another potential problem with (high) RF power radiated indoors is
> interference to other nearby electronic equipment.

I did the RF Exposure calculations and at 65W, its in compliance within
7 feet of the antenna (assuming a liberal 100% duty cycle and accounting
for ground reflections). Since I'm the only one in the room during
transmissions, and physically the closest person to it (I'm 13 feet
away), it should be fine. Take into mind 95% of the time I'm
transmitting on 5-10W, the RF exposure doesn't appear to be a major
concern.

As far as RFI goes, I've already tested various places in our apartment
for it and can't detect any serious problems. Our closest neighbors
haven't complained either.

Seems to be consensus from the sources I've asked that 65W into this
antenna should be safe under these conditions.

73s DE KB1HOL
--
--
J. Rogers KB1HOL
KB1HOLatARRLdotNET

3616. Mutek board for FT290R Mk1

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 16:45:59 UTC
From: The Genie <the_genie@btopenworld.com>
Message-ID: <bao7k6mkk1@sparta.btinternet.com>
Source record: 35323

Hi,
Has anyone got info on this item please ?
Cheers,
Mike

3617. Re: Handmade air-variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 17:30:53 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <h%Nza.13603$rO.1232842@newsread1.prod.itd.earthlink.net>
Source record: 35324

G.Beat wrote:
> It is always advisable to find out what is available off the shelf
> http://www.orenelliottproducts.com/index.html
>
> OEP is (or has been) a major supplier for Drake, Collins, Heathkit, almost
> every tube amplifier manufacturer,
> and many antenna tuners, etc,
>
> OEP is providing HW-8 owners with replacement capacitors for their rigs, at
> very reasonable prices, over 10 years
> after Heathkit has been out of the kit business.
>
> Check out their M73 product line.
> ---------------------------------
> Oren Elliott Products, Inc. is the largest domestic manufacturer of
> air-dielectric variable capacitors
> During World War II, we supplied the Allies with 3500 capacitors per day,
> and by the end of the war our company was the world's largest producer of
> air trimmers.
>
> OEP's ability to manufacture subcomponents in-house (particularly via
> flexible processes like CNC machining) enables us to produce highly
> customized assemblies with short lead times at low cost. We've produced
> several capacitors that don't fit into any of our standard configurations,
> some built to a customer's specs, some developed jointly with customers, and
> others engineered by OEP to perform electrically and mechanically to a
> customer's requirements.
>
> Some of these customized caps have been air variables made as a drop-in
> replacement for other manufacturers' capacitors, matching them dimensionally
> and electrically. Others have been more radical departures from our standard
> line; they've included fixed air capacitors, fixed Teflonï¿½-dielectric caps,
> screw-type air-dielectric trimmer caps, several screw-type
> Teflonï¿½-dielectric trimmer caps, pressurized-gas-dielectric variable
> capacitors, and liquid-dielectric variable capacitors.
>
> They also produce variable inductors
> http://www.orenelliottproducts.com/variable.htm
>
> Oren Elliott Products, Inc.
> P.O. Box 638
> Edgerton, OH 43517
> PH: 419-298-2306
> Fax: 419-298-3545

> e-mail: oep@bright.net
>
> Greg, w9gb

Another great website ! I also remember Ham Radio Mag had an article on an easy way to build a neutralizing cap good for a number of ham radio tx applications. Its in one of my dad's old HR mags (silent key WB8ETH). If I can find it, I will post it !.

The company Greg mentions also carried ROLLER INDUCTORS !!! :):):)

Thanks OM

Adam

3618. 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:09:40 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <EzOza.13622$rO.1237687@newsread1.prod.itd.earthlink.net>
Source record: 35325
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I am an SWL who has worked on tube rigs before. I have been inspired to build my own regenerative detector and have most of the parts. I was wondering if a 6N7 dual triode would make a good tube. I figured it would. I want to run the thing with 135 VDC on the plate. I am hoping to be able to work as high as the 16 meter broadcast band (just below 18 MHz), but even 19 metres would be quite nice (below 16 MHz).

So, 6N7, a good tube or not. I figured it seemed close to tubes used by hams before in similar apps including a VFO. It also looks to be a good rugged miltary metal tube in good supply (NOS US Army Signal Corps types are easily had for under $10)

In the end I wish to use an Octal based tube becuase it seems more authentic (an easier to work with, and I have parts around) and would like to keep the plate voltage around 90 - 135 VDC to keep battery and power supply configuration simple.

Thanks.

Adam

3619. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:14:56 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <baocr0ehc1@freenet9.carleton.ca>
Source record: 35326

"Ian White, G3SEK" (G3SEK@ifwtech.co.uk) writes:
> Paul Burridge wrote:
>>
>>Is it feasible to build one for this sort of frequency? What would be
>>the approximate dimensions? Anyone care to offer an educated guess?
>
> About (2450/500) = 4.9 times the size of the one in your microwave oven
> - and approaching 4.9-cubed times the weight.
>
> Finding a suitable permanent magnet might be fun. Getting it out of the
> car might be even more fun...
>
Or dangerous. I once pulled a pair of magnets out of a hard drive, they
were pretty small in size, and got my finger stuck between them. It wasn't
hurt, but it took a bit of effort to pry the magnets apart. The mind boggles
at the magnet you are describing.

Michael VE2BVW

3620. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:48:39 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <7cdvcv4b9ooseijbjnmqe8bbco8vdt9cbr@4ax.com>
Source record: 35314

On Fri, 23 May 2003 19:58:45 -0500, Jim Adney <jadney@vwtype3.org>
wrote:

>As commercial transmitters go, I think those were pretty small ones.
>Right now I've got a set of 4 Machlett water cooled tetrodes that each
>weigh 130 lbs. They are rated at 175kW continuous each. We're using
>them in pairs to make 2 push-pull pulsed amplifiers that will put out
>over 2MW each for 50 milliseconds.

I guess that's fine for *very* short broadcasts. :-)

>Just for comparison, each of these tubes takes 6kW of filament power.

Amazing!

>And these are not nearly the largest power tubes available.

Indeed. I wasn't trying to suggest the World Service tubes were
anything in that league. In fact it surprised me even at that time
that the station ran on such a modest power level, given what they
expected from it. I can't recall how much VoA puts out, but I'm sure
it dwarfs the WS by some order of magnitude. Anyone know?

3621. Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:48:41 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <3mdvcvce5d6sv4on9vhpfqd91g8si24ibv@4ax.com>
Source record: 35315

Is it feasible to build one for this sort of frequency? What would be
the approximate dimensions? Anyone care to offer an educated guess?

3622. Re: Homebrew valve CW/DSB transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:48:48 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <updvcvckf95jlb8058mpdve233mm6sc33r@4ax.com>
Source record: 35316

On Sat, 24 May 2003 09:34:15 GMT, nospam_ronayling@hotmail.com (Ron)
wrote:

>Hi
>I'm just about to start a long awaited valve project, its
>a valve CW QRP transmitter with a simple Double Sideband
>modulator, the original design was from the Sprat magazine
>it was called the DSB1 by G3YUQ, I'd love to hear from anyone
>that built this or knows anything about it, or even fancies a
>go at building it now!
>cheers from Ron G3YUH ronayling@hotmail.com

What's spec of it? What valves does it use and are they generally
available?

3623. Re: Homebrew valve CW/DSB transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 18:50:07 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <gmfvcvk0hepfahokrafijsadro4avekpu5@4ax.com>
Source record: 35317

On Sat, 24 May 2003 09:34:15 GMT, nospam_ronayling@hotmail.com (Ron)
wrote:

>Hi
>I'm just about to start a long awaited valve project, its
>a valve CW QRP transmitter with a simple Double Sideband
>modulator, the original design was from the Sprat magazine
>it was called the DSB1 by G3YUQ, I'd love to hear from anyone
>that built this or knows anything about it, or even fancies a
>go at building it now!
>cheers from Ron G3YUH ronayling@hotmail.com

What's spec of it? What valves does it use and are they generally
available?

3624. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 19:02:47 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <baoitrsrq1@bob.news.rcn.net>
Source record: 35331
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

The 6N7 is a relatively high-power tube. I don't know why you'd want a dual tube with a common cathode. I'd consider a 6J5. The 6SN7 is the dual version of the 6J5 and they were very widely used in early TV sets.

None of these types are at all "authentic" of the heyday of the regenerative detector. Regenerative detectors were long gone before the octal base was introduced. You'd have to go back to at least the 27 or 37. Or the 30 for low-power battery operation. IIRC, 135 V is much higher than the typical B+ supply used for regenerative detectors. Half that seems more familiar from my regen rcvr days.

"A. Trent Phillips" <atrentphillipsnojunk@yahoo.com> wrote in message news:EzOza.13622$rO.1237687@newsread1.prod.itd.earthlink.net...
> I am an SWL who has worked on tube rigs before. I have been inspired to
> build my own regenerative detector and have most of the parts. I was
> wondering if a 6N7 dual triode would make a good tube. I figured it
> would. I want to run the thing with 135 VDC on the plate. I am hoping to
> be able to work as high as the 16 meter broadcast band (just below 18
> MHz), but even 19 metres would be quite nice (below 16 MHz).
>
> So, 6N7, a good tube or not. I figured it seemed close to tubes used by
> hams before in similar apps including a VFO. It also looks to be a good
> rugged miltary metal tube in good supply (NOS US Army Signal Corps types
> are easily had for under $10)
>
> In the end I wish to use an Octal based tube becuase it seems more
> authentic (an easier to work with, and I have parts around) and would
> like to keep the plate voltage around 90 - 135 VDC to keep battery and
> power supply configuration simple.
>
> Thanks.
>
> Adam
>

3625. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 19:25:23 UTC
From: Steve Terry <g4wwk-remove-to-reply-@tesco.net>
Message-ID: <DGPza.11660$sJ4.92@newsfep4-winn.server.ntli.net>
Source record: 35329
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Paul Burridge" <redscar@waitrose.notformail.com> wrote in message
news:cs80dvkhjfjm2reqgpb72u9c7omub8elqj@4ax.com...
> Hi all,
> I'd like to buy a decently comprehensive book on practical UHF
> transmitter/receiver design and construction, but there doesn't seem
> to be any titles in the PW/RSGB bookshop, which is rather surprising
> and disappointing. Would anyone care to suggest any titles that might
> fit the bill?
> thanks.
> p.
>
RSCB VHF UHF manual ?

Steve Terry

3626. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 19:40:49 UTC
From: Jim McShane <jimmcshane@prodigy.net>
Message-ID: <5VPza.7614$gg.3689@newssvr17.news.prodigy.com>
Source record: 35330
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"A. Trent Phillips" wrote...

> So, 6N7, a good tube or not. I figured it seemed
> close to tubes used by hams before in similar apps
> including a VFO. It also looks to be a good
> rugged miltary metal tube in good supply (NOS
> US Army Signal Corps types are easily had for
> under $10)

FWIW, I have new 6N7 (mostly Ken-Rad) JAN
tubes in stock, on sale for $2.50 ea. until 5/31 or
I run out.

Jim McShane
Need Tubes? Got a H-K Citation (Pre) Amp?
Check http://pages.prodigy.net/jimmcshane
Repro knobs for Citation gear in stock!

3627. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 20:52:20 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3ECFDAA7.A576BAF8@gte.net>
Source record: 35332
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"A. Trent Phillips" wrote:

> I am an SWL who has worked on tube rigs before. I have been inspired to
> build my own regenerative detector and have most of the parts. I was
> wondering if a 6N7 dual triode would make a good tube. I figured it
> would. I want to run the thing with 135 VDC on the plate. I am hoping to
> be able to work as high as the 16 meter broadcast band (just below 18
> MHz), but even 19 metres would be quite nice (below 16 MHz).
>
> So, 6N7, a good tube or not. I figured it seemed close to tubes used by
> hams before in similar apps including a VFO. It also looks to be a good
> rugged miltary metal tube in good supply (NOS US Army Signal Corps types
> are easily had for under $10)
>
> In the end I wish to use an Octal based tube becuase it seems more
> authentic (an easier to work with, and I have parts around) and would
> like to keep the plate voltage around 90 - 135 VDC to keep battery and
> power supply configuration simple.
>
> Thanks.
>
> Adam

Hi Adam,
I recently built the receiver at:
http://www.jvgavila.com/compac.htm

Very nice w/ plug in coils.
Dale W4OP

3628. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 21:12:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ElVrmiENB+z+EAqn@ifwtech.co.uk>
Source record: 35333

Paul Burridge wrote:
>On Sat, 24 May 2003 14:59:36 +0100, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> wrote:
>
>>Paul Burridge wrote:
>>>
>>>Is it feasible to build one for this sort of frequency? What would be
>>>the approximate dimensions? Anyone care to offer an educated guess?
>>
>>About (2450/500) = 4.9 times the size of the one in your microwave oven
>>- and approaching 4.9-cubed times the weight.
>>
>>Finding a suitable permanent magnet might be fun. Getting it out of the
>>car might be even more fun...
>
>Thanks, Ian. Now a really stupid question: is there any way of
>obtaining a broad band output from one of these or is one stuck with
>one single, hi-q resonant frequency?

I'm not an expert, but it's fundamentally the single frequency unless
you can tune the cavities (plural).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3629. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 21:14:28 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <e17tCFF0C+z+EAJB@ifwtech.co.uk>
Source record: 35334
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Paul Burridge wrote:
>
>Hi all,
>
>I'd like to buy a decently comprehensive book on practical UHF
>transmitter/receiver design and construction, but there doesn't seem
>to be any titles in the PW/RSGB bookshop, which is rather surprising
>and disappointing. Would anyone care to suggest any titles that might
>fit the bill?

Er, yes... some parts are getting a bit dated as technology moves on,
but the fundamentals are still solid.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3630. Please help ID homemade tube tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 21:34:33 UTC
From: mcalhoun@ksu.edu
Message-ID: <baooh9$l5k@unix1.cc.ksu.edu>
Source record: 35335

Somewhere/when in my ancient past I acquired a homemade tube tester,
perhaps built from an ARRL (or other) construction article, which I'd
like to be able to use. If someone recognizes it from my description,
it'll save me a lot of trouble reverse-engineering the thing.

It is housed in a 12" x 8" x 3" high, 5-sided, Aluminum chassis and is
designed to be used flat with the open side down, the handle facing the
user, and the AC power cord coming out the "rear". Also on the handle-
side are red and black binding posts (perhaps for output to a meter?)
and the end of a lockable pot. Here is a rough picture:

```
|AC power cord <--- 12 inches --->
+----+---------------------------------------+ LEGEND
| PIN SET UP | ======
| TSa TSb TSc TSd Sw9 Sw5 Sw1 | "Sw" = 3-position switch:
| Sw10 Sw6 Sw2 | left is labeled "+"
| TSe TSf TSg TSh Sw11 Sw7 Sw3 | center s labeled off
| Sw12 Sw8 Sw4 | right is labeled "-"
| HTR PILOT | (By "labeled" I mean
| OK | "scratched onto chassis")
| |
| HEATER HEATER HEATER | HTR OK is a red-bezel lamp
| VOLTAGE 6AF6G TEST PIN PIN | PILOT is a yellow- " lamp
| SELECTOR EYE SWITCH SELECTOR SELECTOR |
| SWITCH TUBE SWITCH SWITCH | "TS" means "Tube Socket",
+-----------+-----------+----------+----------+ and the letters mean:
|| | | | a = funny 5-pin
|| | POT | b = funny 7-pin
One RED +----------------------+ c = (sub?) miniature 7-pin
& one BLACK HANDLE d = miniature (?) 9-pin
binding post e = octal
f = loctal
By "octal-looking" I mean the tube socket LOOKS g = 9-pin octal-looking
like an octal socket except for the pin count. h = 12-pin octal-looking
```

The HEATER VOLTAGE SELECTOR SWITCH has positions for 0 (also marked "off"),
1.5, 3, 5, 6, 9, 12, 16, and 24.

The TEST SWITCH has three positions marked HTR.IND., HRT.CAP.EL.CAP, and
GND.LK.CAP.

Both HEATER PIN SELECTOR SWITCHes have positions 1 through 12.

Beneath the chassis are:
* A 7-pin miniature tube with totally-obliterated markings (I'll put it
in the refrigerator later and see if I can "huff" some markings into

visibility)
* Two transformers:
* The umpteen-wire one goes to the HEATER VOLTAGE SELECTOR SWITCH,
so its function is obvious
* The other one is mounted so I can't count its wires, but two wires
go to what I suspect are the heater pins of the above-mentioned
tube, and another wire goes to a semiconductor diode in series
with a 100-ohm resistor and from the resistor to a 30-40 micro-
farad, 450-volt capacitor to ground, undoubtedly to provide DC
for the tube under test.
* The lockable potentiometer's marking don't tell me its resistance,
(but I can find out by unsoldering one lead)
* Six resistors (one may be a capacitor?) not mentioned earlier

The tester is VERY NEATLY wired, especially considering the large number
of wires connecting practically everything to everything else! I suspect
I can deduce how to use the tester, but I'd sure like to have some
operating instructions. If anyone recognizes the design and can cite its
source, I'll be VERY appreciative!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3631. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 23:30:09 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3ed00084$0$48908$edfadb0f@dtext02.news.tele.dk>
Source record: 35338
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hello Paul

> It's the fundamentals I'm more interested in. I'd just appreciate a
> currently available title!

You can still get it at the RSGB, the title are "The VHF/UHF Handbook"
and it is a 2002 reprint. the ISBN number is: 1-872309-42-9 and the
price is £19.99 and £16.99 if you are a RSGB member.

Regards Max

3632. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 23:36:42 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3ED00303.CFDA60A9@ieee.org>
Source record: 35339

Paul Burridge wrote:

> On Sat, 24 May 2003 14:59:36 +0100, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >Paul Burridge wrote:
> >>
> >>Is it feasible to build one for this sort of frequency? What would be
> >>the approximate dimensions? Anyone care to offer an educated guess?
> >>
> >About (2450/500) = 4.9 times the size of the one in your microwave oven
> >- and approaching 4.9-cubed times the weight.
> >
> >Finding a suitable permanent magnet might be fun. Getting it out of the
> >car might be even more fun...
>
> Thanks, Ian. Now a really stupid question: is there any way of
> obtaining a broad band output from one of these or is one stuck with
> one single, hi-q resonant frequency?

Well if you are making your own, then you might only use a single filament
and two plates on either side. A magnetic field is used in the usual
configuration.

Connect an external tuned circuit to the two plates and tune to the
frequency
you want. I leave the design details for extra credit. You have to adjust
the voltage
and the magnetic field to match the frequency and also the spacing of the
plates.

Normal magnetrons use 6 or so internal cavities and there are tuneable units
that have
a tuning mechanism inside.

Good luck
Bill K7NOM

3633. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-24 23:37:52 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3ED0034B.4B3172DE@ieee.org>
Source record: 35340

Paul Burridge wrote:

> On Sat, 24 May 2003 14:59:36 +0100, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >Paul Burridge wrote:
> >>
> >>Is it feasible to build one for this sort of frequency? What would be
> >>the approximate dimensions? Anyone care to offer an educated guess?
> >>
> >About (2450/500) = 4.9 times the size of the one in your microwave oven
> >- and approaching 4.9-cubed times the weight.
> >
> >Finding a suitable permanent magnet might be fun. Getting it out of the
> >car might be even more fun...
>
> Thanks, Ian. Now a really stupid question: is there any way of
> obtaining a broad band output from one of these or is one stuck with
> one single, hi-q resonant frequency?

Another thought.

Give up on the magnetron and use a klystron.

Bill K7NOM

3634. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 00:19:26 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1053821967.314801@auth2.dns.griffin.net.uk>
Source record: 35341
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

the old one is very good..if the new edition is as good buy it..and do the rsgb still have members

simon g0zen
"Max" <Max_Jens@post9.tele.dk.invalid> wrote in message
news:3ed00084$0$48908$edfadb0f@dtext02.news.tele.dk...
> Hello Paul
>
> > It's the fundamentals I'm more interested in. I'd just appreciate a
> > currently available title!
>
> You can still get it at the RSGB, the title are "The VHF/UHF Handbook"
> and it is a 2002 reprint. the ISBN number is: 1-872309-42-9 and the
> price is £19.99 and £16.99 if you are a RSGB member.
>
> Regards Max
>
>

3635. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 01:18:32 UTC
From: Phil Witt <pwitt@wcov.com>
Message-ID: <i760dv4unups8cc36efk9roe5s17aegehe@4ax.com>
Source record: 35342
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

6SQ7 is an excellent tube for the purpose.

Oddly, the other day I stopped by a trash pile on the curb and pulled out a black crackle-finish box with some switches on it. When I took it apart it contained a 6N7, selenium, and plug in coil. There was no output to the circuit. I should have grid-dipped the coil but I just gave the whole thing away.

3636. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 02:24:05 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <fp80dvcv9mmku7c0iiq1v5f336k0r01221@4ax.com>
Source record: 35327

On Sat, 24 May 2003 14:59:36 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Paul Burridge wrote:
>>
>>Is it feasible to build one for this sort of frequency? What would be
>>the approximate dimensions? Anyone care to offer an educated guess?
>
>About (2450/500) = 4.9 times the size of the one in your microwave oven
>- and approaching 4.9-cubed times the weight.
>
>Finding a suitable permanent magnet might be fun. Getting it out of the
>car might be even more fun...

Thanks, Ian. Now a really stupid question: is there any way of
obtaining a broad band output from one of these or is one stuck with
one single, hi-q resonant frequency?

3637. UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 02:24:06 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <cs80dvkhjfjm2reqgpb72u9c7omub8elqj@4ax.com>
Source record: 35328
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi all,

I'd like to buy a decently comprehensive book on practical UHF
transmitter/receiver design and construction, but there doesn't seem
to be any titles in the PW/RSGB bookshop, which is rather surprising
and disappointing. Would anyone care to suggest any titles that might
fit the bill?

thanks.

p.

3638. Re: QRP Kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 05:32:22 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <GzYza.259586$pa5.251134@rwcrnsc52.ops.asp.att.net>
Source record: 35343

Check out the K1 or the K2 at www.elecraft.com
-rob N7QT

"pacbell" <trowley@pacbell.net> wrote in message
news:iATya.3163$Ei2.162969727@newssvr13.news.prodigy.com...
> Thanks for the insight - any other kits I should investigate? Wilderness
> SST, MFJ's QRP cub, etc?
>
> Tom
>
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> news:vcnf03tmac65fd@corp.supernews.com...
> > Tom
> >
> > In general, the Vectronics kits have tended to be a bit marginal,
although
> > they are cheap and widely available.
> >
> > The SW-40+, on the other hand, is widely respected, and there is a LOT
of
> > information on the net about it, including a wonderful web site by
VE3DNL
> > which is also on the QRP-L CD. The downside is that Dave Benson is
pretty
> > well swamped, so his delivery times aren't great, but you can check on
his
> > web site how long the wait is.
> >
> > ..
> >
> > "pacbell" <trowley@pacbell.net> wrote in message
> > news:hnDya.2504$wa.160062698@newssvr14.news.prodigy.com...
> > > Hi
> > > I'm looking to build a QRP rig for 40 meters. Does anyone have
> experience
> > > with the Vectronics VEC-1320 or Small Wonders SW+ ? Any other
> suggestions?
> > >
> > > 73
> > > Tom
> > > KG6QPV
> > >
> > >
> >

> >
>
>

3639. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 06:30:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vd0onf8udbs862@corp.supernews.com>
Source record: 35344
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

There's an ARRL book titled _The ARRL UHF/Microwave Experimenter's Manual_ that sounds like what you're looking for. Although it seems to contain a great deal of practical and useful information, I can't personally recommend it, since I've done very little amateur UHF experimentation. Perhaps someone who has made use of this book can comment on it.

Roy Lewallen, W7EL

Paul Burridge wrote:
> Hi all,
>
> I'd like to buy a decently comprehensive book on practical UHF
> transmitter/receiver design and construction, but there doesn't seem
> to be any titles in the PW/RSGB bookshop, which is rather surprising
> and disappointing. Would anyone care to suggest any titles that might
> fit the bill?
>
> thanks.
>
> p.

3640. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 07:18:36 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <icq0dvo0guabg9k30fjbv3tl4a7t8f4q82@4ax.com>
Source record: 35336
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 24 May 2003 20:45:53 +0100, Walt Davidson
<walt99@tiscali.co.uk> wrote:

>What about the RSGB VHF-UHF manual? Or don't they do it any more?
>Perhaps a little too advanced for the current membership base.

I can only assume it's no longer available. :-(

3641. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 07:18:37 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <oeq0dvgfdmfhb15i9kq57db3acepr0dje8@4ax.com>
Source record: 35337
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 24 May 2003 22:14:28 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Paul Burridge wrote:
>>
>>Hi all,
>>
>>I'd like to buy a decently comprehensive book on practical UHF
>>transmitter/receiver design and construction, but there doesn't seem
>>to be any titles in the PW/RSGB bookshop, which is rather surprising
>>and disappointing. Would anyone care to suggest any titles that might
>>fit the bill?
>
>Er, yes... some parts are getting a bit dated as technology moves on,
>but the fundamentals are still solid.

It's the fundamentals I'm more interested in. I'd just appreciate a
currently available title!

3642. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 08:18:24 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <saq0dvcr2i62p3k5j9hf3bg5g7l3j17qj9@4ax.com>
Source record: 35345
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 24 May 2003 19:24:06 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>
>Hi all,
>
>I'd like to buy a decently comprehensive book on practical UHF
>transmitter/receiver design and construction, but there doesn't seem
>to be any titles in the PW/RSGB bookshop, which is rather surprising
>and disappointing. Would anyone care to suggest any titles that might
>fit the bill?

What is wrong with the RSGB VHF UHF Manual edited by Jessop ?

From the ARRL, the UHF/Microwave project manual and the UHF/microwave
experimenter's manual are quite good.

Also the UHF Compendium by K. Weiner may be of interest.

However, since these books are 10-20 years old, it might be a better
idea to use PLL in frequency synthesis instead of long frequency
multiplier chains.

Paul OH3LWR

3643. Re: Homebrew valve CW/DSB transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 08:54:54 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3ed08279.4501157@news.freeserve.co.uk>
Source record: 35346

Hi Paul
Well nothing much is generally available although about
80% can be obtained from Maplin, its a very clever circuit
I thought and I've trawled a few!
Really for 160mtr and 80, VFO driver and twin PA for CW
but the really clever bit is the DSB it mods a transformer
connected to the screen grids of the twin PA to get the DSB
which I thought was very clever, I suppose about 10w Peak
6 valves EF80's ECC82's could be either EL84 or 6V6 PA
would make it look good (ï¿½2.95each on Maplin)
from Ron.....

On Sat, 24 May 2003 11:50:07 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>On Sat, 24 May 2003 09:34:15 GMT, nospam_ronayling@hotmail.com (Ron)
>wrote:
>
>>Hi
>>I'm just about to start a long awaited valve project, its
>>a valve CW QRP transmitter with a simple Double Sideband
>>modulator, the original design was from the Sprat magazine
>>it was called the DSB1 by G3YUQ, I'd love to hear from anyone
>>that built this or knows anything about it, or even fancies a
>>go at building it now!
>>cheers from Ron G3YUH ronayling@hotmail.com
>
>What's spec of it? What valves does it use and are they generally
>available?

3644. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 08:58:39 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3ed1855f.5243482@news.freeserve.co.uk>
Source record: 35247
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Just to put one on Ebay 1971 edition, the best as it
has lots of valvey stuff as well as transistor
from Ron...

On Sun, 25 May 2003 00:18:36 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>On Sat, 24 May 2003 20:45:53 +0100, Walt Davidson
><walt99@tiscali.co.uk> wrote:
>
>
>>What about the RSGB VHF-UHF manual? Or don't they do it any more?
>>Perhaps a little too advanced for the current membership base.
>
>I can only assume it's no longer available. :-(

3645. MIDLAND SYN-TECH

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 09:09:15 UTC
From: Bruce Summers <k8ibe@chartermi.net>
Message-ID: <3ED0883B.5C69D4E4@chartermi.net>
Source record: 35248

LOOKING FOR THE MIDLAND "70-056-C" TRUNK MOUNT MODELS AND THE
PROGRAMER FOR THE PROMS.

3646. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 09:59:29 UTC
From: dmu_pkearn_dmu@rondomondo.eircom.ru.tv.net
Message-ID: <3ed092ad.2136512@news1.eircom.net>
Source record: 35249
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 24 May 2003 19:24:06 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>I'd like to buy a decently comprehensive book on practical UHF
>transmitter/receiver design and construction, but there doesn't seem
>to be any titles in the PW/RSGB bookshop, which is rather surprising
>and disappointing. Would anyone care to suggest any titles that might
>fit the bill?

As someone suggested the RSGB VHF UHF MANUAL (still in print?)
(The ARRL must havesomehting similar??)

Others..

VHF COMMUNICATIONS Magazine (A5 size) Look for Agent in GBR
Blue front cover
(still going?)

DUBUS Magazine (A5 size) look for Agent in GBR.
Green-ish front cover
(still going?)

Both of these have(had?) plenty of VHF/UHF/SHF stuff in them and
plenty of technical articles to build.

I cant remember how 'low'(freq) the RSGB Series MICROWAVE HANDBOOK
goes but might be something in there ?
Theres at least 3 volumes in this.

3647. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 10:57:36 UTC
From: Airy R Bean <SPAM@trap>
Message-ID: <3ed0a284$2_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 35250
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Which is an interesting reflection upon the RSCB's false
claim to represent _ALL_ UK Brit Hams - making profits
out of those who are not subscribers to its book publishing
business.

Max <Max_Jens@post9.tele.dk.invalid> wrote in message
news:3ed00084$0$48908$edfadb0f@dtext02.news.tele.dk...
You can still get it at the RSCB, the title is "The VHF/UHF Handbook"
> and the
price is £19.99 and £16.99 if you are a RSCB member.

3648. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 10:58:15 UTC
From: Airy R Bean <SPAM@trap>
Message-ID: <3ed0a285_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 35251
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Member" - as in, "prick"?

zindazenda <zen@lineisp.co.uk> wrote in message
news:1053821967.314801@auth2.dns.griffin.net.uk...
> the old one is very good..if the new edition is as good buy it..and do the
> rsgb still have members

3649. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 11:25:09 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3ED0A815.7A3AAEF@bloomer.net>
Source record: 35252

Try Jameco Electronics at:
http://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/searchResult.d2w/report?sort=BKW&search=2708

They have them listed as $4.95 each and have copies of the documentation on-line. They list them as "refurbished" and I have no idea what that means for an IC. How does one "refurbish" an IC??? ;)

Anyhow, good luck with your project!

Scott N0EDV
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

Mike Andrews wrote:
>
> I'm hoping to copy the programming from the three 2708 EPROMs
> in my DEBEG 2000 HF receiver, Just In Case, and am looking for
> three 2708 EPROMs or their electrical and pinout equivalents.
>
> Under US$10 would be good.
>
> --
> All children should be aptitude-tested at an early age and, if their
> main or only aptitude is for marketing, drowned.
> -- David Canzi, news.admin.net-abuse.email, 2001-03-21

--

3650. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 12:10:52 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3ed0b270.2026261@news.freeserve.co.uk>
Source record: 35253
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Nice 1971 edition
Bidding starts at ï¿½2.50 ï¿½3.50 postage (its heavy)

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3026729181

On Sat, 24 May 2003 19:24:06 -0700, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>
>Hi all,
>
>I'd like to buy a decently comprehensive book on practical UHF
>transmitter/receiver design and construction, but there doesn't seem
>to be any titles in the PW/RSGB bookshop, which is rather surprising
>and disappointing. Would anyone care to suggest any titles that might
>fit the bill?
>
>thanks.
>
>p.

3651. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 12:18:18 UTC
From: James Spriggs <See.Message.Text@forReply.net>
Message-ID: <3ed0b410$0$924$afc38c87@news.optusnet.com.au>
Source record: 35254

"Scott" wrote in message
> How does one "refurbish" an IC???

By removing IC's from scrapped PCB's and
(sometimes) desoldering the legs cleanly, and
(sometimes) straighting the legs, and
(soemtimes) UV erasing the memory contents for Eproms.

Jim

3652. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 13:28:57 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <EWXbK2BZUM0+EARP@ifwtech.co.uk>
Source record: 35255
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Paul Burridge wrote:
>On Sat, 24 May 2003 22:14:28 +0100, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> wrote:
>
>>Paul Burridge wrote:
>>>
>>>Hi all,
>>>
>>>I'd like to buy a decently comprehensive book on practical UHF
>>>transmitter/receiver design and construction, but there doesn't seem
>>>to be any titles in the PW/RSGB bookshop, which is rather surprising
>>>and disappointing. Would anyone care to suggest any titles that might
>>>fit the bill?
>>
>>Er, yes... some parts are getting a bit dated as technology moves on,
>>but the fundamentals are still solid.
>
>It's the fundamentals I'm more interested in. I'd just appreciate a
>currently available title!
>
Maybe I was a bit too subtle...

'The VHF/UHF DX Book' is available from both RSGB and ARRL, and there
are links to both from my site.

See below!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor,
http://www.ifwtech.co.uk/g3sek

3653. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 14:11:05 UTC
From: Frank Turner-Smith G3VKI <g3vki@ntlworld.com>
Message-ID: <baqish$2eest$1@ID-185765.news.dfncis.de>
Source record: 35256
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Airy R Bean" <SPAM@trap> wrote in message
news:3ed0a285_2@mk-nntp-1.news.uk.worldonline.com...
> "Member" - as in, "prick"?
>
No, you're a prick.
(_!_)

3654. ION GENERATOR!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 14:49:23 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3ED0D7F3.BAB0B387@sympatico.ca>
Source record: 35257

I just purchased an air purifier for my shack with the option of "NEGATIVE ION" generation. The air cleaner uses a high voltage cell to attrac dust. Does anybody know a method to verify if the unit generates ions without opening the unit. The manual mention that the ions are generated from a needle point system and after a while the needle needs to be changed. Thanks! Jos VE2AUC

3655. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 14:54:42 UTC
From: Pellucid <dave@jolly27.freeserve.co.uk>
Message-ID: <baqlvifep1@news7.svr.pol.co.uk>
Source record: 35258
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"The UHF Compendium part 1 and 2" by K. Weiner is good, very practical
with theory included.
.
.
Walt Davidson <walt99@tiscali.co.uk> wrote in message
news:itivcv8d5nj8h2bo6l4dneoe3srhppeumt@4ax.com...
> On Sat, 24 May 2003 19:24:06 -0700, Paul Burridge
> <redscar@waitrose.notformail.com> wrote:
>
> >I'd like to buy a decently comprehensive book on practical UHF
> >transmitter/receiver design and construction, but there doesn't seem
> >to be any titles in the PW/RSGB bookshop, which is rather surprising
> >and disappointing. Would anyone care to suggest any titles that might
> >fit the bill?
>
> What about the RSGB VHF-UHF manual? Or don't they do it any more?
> Perhaps a little too advanced for the current membership base.
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

3656. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 15:30:41 UTC
From: ogrowup@webtv.net
Message-ID: <14835-3ED0E1A1-465@storefull-2237.public.lawson.webtv.net>
Source record: 35259

1) The 'nipple' for tubes with a cap is under the cap, where the wire attatched to the inside of the cap comes out.
2) Maybe 30 +/- years ago, there was an article in one of the eloctronics magazines {Maybe "Electronics Illustrated" or Elementary Electronics} on an attempt to re-create the first vacuum tube made in Canada. The interesting aspect is that it didn't use a light bulb as an inspiration, but instead was modeled on a cartridge fuse!

"This is one race of people [the Irish] for whom psychoanalysis is of no use whatsoever."
Sigmund Freud

3657. Re: ION GENERATOR!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 15:55:12 UTC
From: Joel <joel@cyberbest.com>
Message-ID: <WH5Aa.324$9c2.124897336@twister1.starband.net>
Source record: 35260

Are you sure you want that in your shack? Most of them create Ion's by sparking (QRM).. I'm not sure that's what I would want in my shack

"jos" <soj@sympatico.ca> wrote in message news:3ED0D7F3.BAB0B387@sympatico.ca...
> I just purchased an air purifier for my shack with the option of
> "NEGATIVE ION" generation. The air cleaner uses a high voltage cell to
> attrac dust. Does anybody know a method to verify if the unit generates
> ions without opening the unit. The manual mention that the ions are
> generated from a needle point system and after a while the needle needs
> to be changed. Thanks! Jos VE2AUC
>

3658. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 16:08:40 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <cU5Aa.79375$_e6.43307@news2.east.cox.net>
Source record: 35261
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Adam

A good regenerative detector should run with less than 45 volts on the plate. Even a low mu triode, such as a IH4 or 30 will often run with 12 to 16 volts B+.

The 6N7 would work, and I suspect almost any dual triode you find would also be satisfactory. The 19 dual triode was used in the Doerle TwinPlex--a Google search should give plenty of info.

Pete

"A. Trent Phillips" <atrentphillipsnojunk@yahoo.com> wrote in message news:EzOza.13622$rO.1237687@newsread1.prod.itd.earthlink.net...
> I am an SWL who has worked on tube rigs before. I have been inspired to
> build my own regenerative detector and have most of the parts. I was
> wondering if a 6N7 dual triode would make a good tube. I figured it
> would. I want to run the thing with 135 VDC on the plate. I am hoping to
> be able to work as high as the 16 meter broadcast band (just below 18
> MHz), but even 19 metres would be quite nice (below 16 MHz).
>

3659. Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 17:54:55 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <l5t1dvkrdjfvi3l3of548rdc7un124emb8@4ax.com>
Source record: 35263

I have three solar panels, each of which will produce
about two (2) amps at 12 volts in full sun. I'd like
to use them to keep a 12-volt battery charged for my
2-meter transceiver, which draws 11 amps max during
transmit.

A couple of questions:

1. To connect the panels in parallel, should I use
a blocking diode on each panel with the diode outputs
connected, or tie all the panels together and just use
one diode? Either way, is any sort of equalizing resistor
advisable?

2. What's good for a cheap and easy charge controller?
I'm thinking about just using something based on a rather
generic (aka Ford) type automotive regulator.

I expect my transmit duty cycle to be something like 10
minutes every couple of days, so I have power to burn here.
So if I need to heat up some equalizing resistors, or waste
some power driving an electromechanical regulator or a relay
or two, it's not a big deal.

Thanks for your advise.

Jim, WA5RRH

3660. FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 18:22:38 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193aa9b7c876197a989680@news-central.giganews.com>
Source record: 35264
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor test gear. This equipment is in good working order. It was all used on my bench at one time or another, but has since been replaced and is too big/heavy/fragile/cheap to be worth hawking on the 'Bay.

READ CAREFULLY: The following WORKING equipment will be placed BEHIND the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN. THIS IS HEAVY STUFF.

- Two Polarad klystron-based UHF/microwave signal generators, similar to http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG. Both are clean and in excellent working condition. Coverage between them is approximately 800 MHz - 4 GHz continuous with FM and CW modulation. I believe I have at least one manual for these units (they're identical except for frequency coverage).

- One HP 8551B spectrum analyzer with two HP 851B display units, similar to http://www.fairradio.com/hp-851b.html. The 8551B and one of the 851Bs are very clean and in good working condition; the other 851B is in unknown condition. This includes the manuals and HP interconnect cable, but NOT the two BNC-BNC cables you'll need to connect the two units; these are easy to obtain just about anywhere. This is a really cool piece of gear that makes a very-serviceable spectrum analyzer for the 10 MHz - 12 GHz range. Its only drawback is the fact that it weighs about 100 pounds and takes up a lot of bench space.

- Maybe some more excess gear, too, depending on what I find in my storage unit. I dunno.

I don't care who picks this gear up, as long as it all finds a good home. IF IT'S STILL THERE TOMORROW MORNING, THE GARBAGE MAN GETS IT.

Again, READ CAREFULLY: I WILL NOT BE HOME. THE GEAR WILL NOT BE AVAILABLE BEFORE 6 PM. DO NOT CALL ME, EMAIL ME, OR OTHERWISE HASSLE ME REGARDING THIS OFFER.

ANY EMAIL I RECEIVE REGARDING THIS OFFER THAT SAYS ANYTHING OTHER THAN "Cool stuff! Thanks, dude!" WILL NOT BE ANSWERED.

I WILL NOT BE ABLE TO RESERVE ANY EQUIPMENT FOR ANY PARTICULAR PERSON, OR MEDIATE ANY DISPUTES BETWEEN PARTIES. :) To the victor go the

spoils!

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3661. Re: ION GENERATOR!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 18:23:43 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3ED10A2F.4060309@ay.com.au>
Source record: 35265

jos wrote:
> I just purchased an air purifier for my shack with the option of
> "NEGATIVE ION" generation. The air cleaner uses a high voltage cell to
> attrac dust. Does anybody know a method to verify if the unit generates
> ions without opening the unit. The manual mention that the ions are
> generated from a needle point system and after a while the needle needs
> to be changed. Thanks! Jos VE2AUC

A simple ion detector can be made from a neon bulb shunted with a 10 nF 100V capacitor. One side is connected to a small plate or other ion collector electrode, the other you earth out via your body (quite safe, the ion current is very low).

The bulb will blink every few seconds when the collector is held a few inches from the output needles. You can do the math and calibrate it if you like, but if all you want is a go/no-go test it will work fine just twisted together and held by one leg, with the other facing the needles.

If you can't get that close to the needles it should still count ions just more slowly with distance. The problem is that the leakage in the capacitor may exceed the ion current collected at large distances so there is no net storage in the capacitor and the voltage never rises above the neon ignition voltage. There is a fair bit of complex physics involved with the ion motion that I don't claim to understand, but a bigger collector and better earth makes it more sensitive.

For the generator the sharper the needles the better the ion production, but the corona generates a little ozone and, more importantly, nitrogen oxides, which combined with moisture make acids which blunt the point after many hours of service.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (25% of Full)

3662. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 18:56:29 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3ED112D0.A6B206E7@rica.net>
Source record: 35266

funkbastler wrote:
>
> I have three solar panels, each of which will produce
> about two (2) amps at 12 volts in full sun. I'd like
> to use them to keep a 12-volt battery charged for my
> 2-meter transceiver, which draws 11 amps max during
> transmit.
>
> A couple of questions:
>
> 1. To connect the panels in parallel, should I use
> a blocking diode on each panel with the diode outputs
> connected, or tie all the panels together and just use
> one diode? Either way, is any sort of equalizing resistor
> advisable?

Use a separate diode for each. This keeps the whole thing from going
down if one panel fails. A schottky diode will increase the output
very slightly, at the expense of higher dark leakage. I suggest
1N5820, 3 amp, 20 volt with .45 volt drop at 3 amps and 2 ma reverse
leakage.

> 2. What's good for a cheap and easy charge controller?
> I'm thinking about just using something based on a rather
> generic (aka Ford) type automotive regulator.

Since the charge current is limited to 6 amps, a shunt regulator that
dumps up to 100 watts (6 amps times 13.8 volts) would not waste any
voltage during charging. You could make one of these with power
transistor or fet driving a lamp bank that draws about 6 amps max.
You would need a low power opamp and voltage reference to test the
battery voltage and adjust the load bank current to keep the voltage
from exceeding the batteries safe charging voltage.

> I expect my transmit duty cycle to be something like 10
> minutes every couple of days, so I have power to burn here.
> So if I need to heat up some equalizing resistors, or waste
> some power driving an electromechanical regulator or a relay
> or two, it's not a big deal.

Agreed.
>
> Jim, WA5RRH

--
John Popelish

3663. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 18:58:06 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3ED1132E.417ADE6E@rica.net>
Source record: 35267

funkbastler wrote:
>
> I have three solar panels, each of which will produce
> about two (2) amps at 12 volts in full sun. I'd like
> to use them to keep a 12-volt battery charged for my
> 2-meter transceiver, which draws 11 amps max during
> transmit.
(snip)
> I expect my transmit duty cycle to be something like 10
> minutes every couple of days, so I have power to burn here.
> So if I need to heat up some equalizing resistors, or waste
> some power driving an electromechanical regulator or a relay
> or two, it's not a big deal.

Perhaps one panel is sufficient ot carry the average load.
This simplifies the voltage regulator by lowering its peak current
rating ot 2 amps. You should still have a blocking diode, though,
because the panel will absorb current in the dark.

--
John Popelish

3664. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 20:01:39 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <oi72dv4b384n9k61440001n6cqlona6ju1@4ax.com>
Source record: 35268

On Sun, 25 May 2003 18:56:29 GMT, John Popelish <jpopelish@rica.net>
wrote:
>
>Since the charge current is limited to 6 amps, a shunt regulator that
>dumps up to 100 watts (6 amps times 13.8 volts) would not waste any
>voltage during charging. You could make one of these with power
>transistor or fet driving a lamp bank that draws about 6 amps max.
>You would need a low power opamp and voltage reference to test the
>battery voltage and adjust the load bank current to keep the voltage
>from exceeding the batteries safe charging voltage.
>

Ahhh.... but then I have to go designing and building things ;-)

I kinda like the idea of using an automotive regulator (which are
series regulators, I think). That way, if it ever quits, I can
just replace the whole thing at virtually no, or at least very
little, cost. I understand that such a setup would either be
charging or not charging (i.e. no "charging just a little" if the
battery voltage is down just a bit), but considering battery
capacity and projected load, that's not a concern.

Is there any reason not to do it that way?

Back to mowing the grass (and weeds) here.....

-jdr-

3665. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 20:09:41 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com>
Source record: 35269
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
<jmiles@pop.removethistomailme.net> wrote:

>OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
>test gear. This equipment is in good working order. It was all used on
>my bench at one time or another, but has since been replaced and is too
>big/heavy/fragile/cheap to be worth hawking on the 'Bay.
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>READ CAREFULLY: The following WORKING equipment will be placed BEHIND
>the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle
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>THIS IS HEAVY STUFF.
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>
>- Two Polarad klystron-based UHF/microwave signal generators, similar to
>http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG. Both
>are clean and in excellent working condition. Coverage between them is
>approximately 800 MHz - 4 GHz continuous with FM and CW modulation. I
>believe I have at least one manual for these units (they're identical
>except for frequency coverage).

Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
to burn..

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

3666. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 20:14:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3ed12165.82380270@news.online.no>
Source record: 35270
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sun, 25 May 2003 01:19:26 +0100, "zindazenda" <zen@lineisp.co.uk>
wrote:

>the old one is very good..if the new edition is as good buy it..and do the
>rsgb still have members
>
yes, we are a few...

Another book is UHF compendium by DJ9HO, or UHF-Unterlage for those of
us who prefer German language. I also bought PA�EZ's book
VHF-UHF-Handboek for curiosity
Still the RSGB VHF-UHF Manual is interesting because you can read all
those old ideas which are not popular today, but may soon be
interesting, I am curious about the Abe Lincoln antenna... and many
more which the authors don't seem to understand that may be useful for
a purpose or another

73
LA8AK
http://home.online.no/~la8ak/

USA has the best democracy money can buy!

remove "postage" to reply

3667. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 20:16:39 UTC
From: averyfineman@aol.com
Message-ID: <20030525161639.20212.00000193@mb-m27.aol.com>
Source record: 35271

In article <3mdvcvce5d6sv4on9vhpfqd91g8si24ibv@4ax.com>, Paul Burridge
<redscar@waitrose.notformail.com> writes:

>Is it feasible to build one for this sort of frequency? What would be
>the approximate dimensions? Anyone care to offer an educated guess?

Feasible? No. Dimensions? As someone suggested already,
scale a microwave oven maggie to a longer wavelength. Since
the magnetic field is also scaled, the magnet is going to be
huge. [magnetic field is an absolute necessity to set up the
electron spin inside the magnetron's simple diode structure]
You really DON'T want to work around such a large magnet.

But WHY?

Magnetrons were used wherever a HIGH power pulse of RF was
needed. Radar was ideal and I rather suspect that beginning
radar design was the impetus for the invention of the magnetron.
UHF range early radar used ring oscillators with several high
power conventional vacuum tubes...rather large structures, bulky,
not very efficient. Had about the same limited QSY capability of
the first magnetrons...not very good.

Amateur radio pulsed RF is rather limited throughout the world as
to peak output power. While pulse position modulation at around
8 KHz repetition rate might be good for a voice link using a rather
short pulse, it would be difficult to get any radio regulating agency
to approve it...required bandwidth would be rather wide. There are
other ways to achieve a much narrower bandwidth communications
link using lower RF power levels.

Harkening back to very early radar days, a single tube coaxial
line resonator oscillator can be built for maximum allowed
regulating agency RF power. I worked on such a system very
close to 500 MHz nearly four decades ago, requiring about 5 KW
RF peak pulse output. The double-line resonator structure was
larger than the average microwave oven's entire box...and that
doesn't include the power supply or the pulse forming network.

One of the early short-range small-boat radars of three decades
ago used modified radiosonde cavity triodes (Bonzer?). Much
lower power output but short ranges didn't need gobs of power.
Radiosonde cavity oscillator assemblies were cranked out at the
hundreds of thousands rate per year a while back.

Today or even two+ decades ago, smaller pulsed RF sources
could be made with Gunn diode assemblies, maybe with IMPATTs.

Those have a wider tuning bandwidth and are much smaller in size. Right now it would be much, much easier to stay with conventional cell site power amplifier structures using a pair of very high f-sub-t transistors...those can be scaled down from 1 to 0.5 GHz much easier than fussing with a very special maggie. You can parallel such amplifiers fairly easily with stripline combiners even at 500 MHz. Bandwidths of 5 to 10 percent.

If you want to have fun doing "mind constructions," I'd suggest a low-frequency TWT or Traveling Wave Tube. Those have an intrinsic octave bandwidth (guaranteed no-fuss QSYs) and don't need the humongous permanent magnet needed by magnetrons. Offhand, you might be able to make a TWT centered at 500 MHz about 2 feet long...provided you have about a dozen other skills plus vacuum pump and specialized metal-glass-working equipment.

Len Anderson
retired (from regular hours) electronics engineer person

3668. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 21:33:25 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd2a4tpae4tu6f@corp.supernews.com>
Source record: 35272
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Can Phil pick it up and redistribute it?
"Spehro Pefhany" <speff@interlog.com> wrote in message
news:fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com...
> On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
> <jmiles@pop.removethistomailme.net> wrote:
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> >OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> >test gear. This equipment is in good working order. It was all used on
> >my bench at one time or another, but has since been replaced and is too
> >big/heavy/fragile/cheap to be worth hawking on the 'Bay.
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> >believe I have at least one manual for these units (they're identical
> >except for frequency coverage).
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> Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
> to burn..
>
> Best regards,
> Spehro Pefhany
> --
> "it's the network..." "The Journey is the reward"
> speff@interlog.com Info for manufacturers:
http://www.trexon.com
> Embedded software/hardware/analog Info for designers:
http://www.speff.com

3669. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 21:38:50 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193ad7c72a370932989681@news-central.giganews.com>
Source record: 35273
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

In article <vd2a4tpae4tu6f@corp.supernews.com>, 10kc@fmtc.com says...
> Can Phil pick it up and redistribute it?

Yep. Anyone who is at the head of the line at 6 PM can claim whatever
they want and sell/give it to whoever else they want.

As it turns out, there was quite a bit more decent stuff in that storage
locker than what I listed. Come get it out of my hair...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3670. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 21:39:21 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193ad7e2be602f12989682@news-central.giganews.com>
Source record: 35274
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Subject: Re: FREE test equipment to good home, Seattle area
From: John Miles <jmiles@pop.removethistomailme.net>

In article <fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com>, you say...
> On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
> <jmiles@pop.removethistomailme.net> wrote:
>
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> >believe I have at least one manual for these units (they're identical
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>
> Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
> to burn..
>

Nah, it tops out at about +10 dBm.

The backward-wave oscillator tube in the HP 8551B probably generates
more power. I used it as a 2-4 GHz (er, Gc) signal source before I got
the Polarad generators.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3671. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 21:52:52 UTC
From: news2020 <user1025@att.net>
Message-ID: <UWaAa.172497$ja4.8739726@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35275
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Evidence. People are getting wiser. I have seen a lot of moving around here (#1053, etc). A lot of people seem to be carrying backpacks with multiple pockets, etc. and also other square bags, etc. Many of the devices seem to be quite compact and portable. The older heavier and bigger items are a dead giveaway and pose an exposure risk and possible liability. These Taiwanese and US Chinese etc seem to be working with computerized compact devices built into cars, microwave ovens, rice cooker type of devices, etc. Looks like Seattle and some others here are a liitle behind in the miniaturization.

"Spehro Pefhany" <speff@interlog.com> wrote in message news:fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com...
> On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
> <jmiles@pop.removethistomailme.net> wrote:
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> "it's the network..." "The Journey is the reward"
> speff@interlog.com Info for manufacturers:
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> Embedded software/hardware/analog Info for designers:
http://www.speff.com

3672. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 22:12:40 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <barfc7fre1@bob.news.rcn.net>
Source record: 35277
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Do you even have the slightest idea what it is you are trying to say?
No one else does.

-Chuck

news2020 wrote:
> Evidence. People are getting wiser. I have seen a lot of moving around here
> (#1053, etc). A lot of people seem to be carrying backpacks with multiple
> pockets, etc. and also other square bags, etc. Many of the devices seem to
> be quite compact and portable. The older heavier and bigger items are a dead
> giveaway and pose an exposure risk and possible liability. These Taiwanese
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> built into cars, microwave ovens, rice cooker type of devices, etc. Looks
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>
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>>>except for frequency coverage).
>>
>>Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
>>to burn..

>>
>>Best regards,
>>Spehro Pefhany
>>--
>>"it's the network..." "The Journey is the reward"
>>speff@interlog.com Info for manufacturers:
>
> http://www.trexon.com
>
>>Embedded software/hardware/analog Info for designers:
>
> http://www.speff.com
>
>

3673. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 22:15:53 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0305251415.33682b3d@posting.google.com>
Source record: 35276
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"A. Trent Phillips" <atrentphillipsnojunk@yahoo.com> wrote in message
news:<EzOza.13622$rO.1237687@newsread1.prod.itd.earthlink.net>...
> I am an SWL who has worked on tube rigs before. I have been inspired to
> build my own regenerative detector and have most of the parts. I was
> wondering if a 6N7 dual triode would make a good tube. I figured it
> would. I want to run the thing with 135 VDC on the plate. I am hoping to
> be able to work as high as the 16 meter broadcast band (just below 18
> MHz), but even 19 metres would be quite nice (below 16 MHz).
>
> So, 6N7, a good tube or not. I figured it seemed close to tubes used by
> hams before in similar apps including a VFO. It also looks to be a good
> rugged miltary metal tube in good supply (NOS US Army Signal Corps types
> are easily had for under $10)

I'd expect the tube to work fine. The common-cathode dual-triode
regen is a venerable design.
>
> In the end I wish to use an Octal based tube becuase it seems more
> authentic (an easier to work with, and I have parts around) and would
> like to keep the plate voltage around 90 - 135 VDC to keep battery and
> power supply configuration simple.

There were certainly many, many octal regens made for ham and SWL use,
homebrew and commercial. I wouldn't be surprised if there were more
octal regens than any other tube type (think of all those basic radio
plans and kits from the late '30s through the '50s).

BTW, you'll probably only need about 30V on the detector plate.

73,
Mike, KK6GM

3674. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 22:29:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vd2gur4m7c2r2d@corp.supernews.com>
Source record: 35278

A typical auto regulator adjusts the alternator field current to control the battery voltage. Depending on the regulator design, it might work pretty much as-is. Old-style mechanical regulators typically had three charge rates -- no charge, where the field was connected to ground; medium charge (relay moving contact not touching either fixed contact), where the field was connected to the ignition line via a series resistor or resistive divider (usually a nichrome wire resistor wound on mica and riveted to the underside of the regulator); and full charge, where the field was connected directly to the ignition line. Intermediate values were obtained by chattering of the relay, which could create a great deal of radio noise. I haven't looked into modern solid-state ones (now often integral to the alternator), but I imagine that some of them are proportional while others might switch. You might need to do some filtering of a switching type to keep the QRN down.

But stability can be a problem, because a solar panel acts like a pretty constant current source, while most other commonly regulated sources are basically constant voltage sources. A large capacitor across the solar panel will sometimes provide a solution if this is a problem. A shunt regulator is a very simple and effective way to do the regulating, although you end up having to dump a lot of power when the battery isn't charging at a high rate. I've gotten by with a simple 3-terminal series regulator. If you're intending to float the batteries, though, you might need to do some sort of adjustment of the charge voltage with temperature to get the maximum battery life.

Roy Lewallen, W7EL

funkbastler wrote:
>
> Ahhh.... but then I have to go designing and building things ;-)
>
> I kinda like the idea of using an automotive regulator (which are
> series regulators, I think). That way, if it ever quits, I can
> just replace the whole thing at virtually no, or at least very
> little, cost. I understand that such a setup would either be
> charging or not charging (i.e. no "charging just a little" if the
> battery voltage is down just a bit), but considering battery
> capacity and projected load, that's not a concern.
>
> Is there any reason not to do it that way?
>
> Back to mowing the grass (and weeds) here.....
>
> -jdr-

>

3675. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 23:08:21 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vd2j8etldoaj3b@corp.supernews.com>
Source record: 35279

Provided all three panels are of the same type and are located in the same sun exposure you can simply parallel them and use one diode to prevent the battery from discharging into them when in the dark. No need for equalizing resistors because the panels are current limited.

I would look for a charge controller designed for use with solar panels rather than trying to use an automotive regulator. You'll find a bunch of them with an Internet search. You might also look at http://www.seslogic.com/microm.html for some inexpensive controllers. Series controllers develop less heat than parallel controllers but you have to be careful that they do not generate RFI that might get into your receiver (many of the series mode units utilize switch mode power supplies to generate the gate voltage for the switch FETs - the Mico-M does not).

3676. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 23:25:23 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193af0bac60c68d5989683@news-central.giganews.com>
Source record: 35280
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

In article <UWaAa.172497$ja4.8739726@bgtnsc05-
news.ops.worldnet.att.net>, user1025@att.net says...
>
> Evidence. People are getting wiser. I have seen a lot of moving around here
> (#1053, etc). A lot of people seem to be carrying backpacks with multiple
> pockets, etc. and also other square bags, etc. Many of the devices seem to
> be quite compact and portable. The older heavier and bigger items are a dead
> giveaway and pose an exposure risk and possible liability. These Taiwanese
> and US Chinese etc seem to be working with computerized compact devices
> built into cars, microwave ovens, rice cooker type of devices, etc. Looks
> like Seattle and some others here are a liitle behind in the
> miniaturization.

Yeah, well, anything not picked up by 6 gets donated to the CIA Widows,
Orphans, and Implants Fund.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3677. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-25 23:56:29 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <barl7d0sn1@drn.newsguy.com>
Source record: 35281
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

>news2020 wrote:
>> Evidence. People are getting wiser. I have seen a lot of moving around here
>> (#1053, etc). A lot of people seem to be carrying backpacks with multiple
>> pockets, etc. and also other square bags, etc. Many of the devices seem to
>> be quite compact and portable. The older heavier and bigger items are a dead
>> giveaway and pose an exposure risk and possible liability. These Taiwanese
>> and US Chinese etc seem to be working with computerized compact devices
>> built into cars, microwave ovens, rice cooker type of devices, etc. Looks
>> like Seattle and some others here are a liitle behind in the
>> miniaturization.

Chuck wrote...
>
> Do you even have the slightest idea what it is you are trying
> to say? No one else does.

Maybe not, but it's a pretty fascinating view of the universe,
where many of the simple humdrum items of our routine lives take
on a mystical, almost magical quality.

Thanks,
- Win

3678. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 00:16:45 UTC
From: john graesser <graesser@tca.net>
Message-ID: <vd2ok7husul1cf@corp.supernews.com>
Source record: 35282

"James Spriggs" <See.Message.Text@forReply.net> wrote in message
news:3ed0b410$0$924$afc38c87@news.optusnet.com.au...
>
> "Scott" wrote in message
> > How does one "refurbish" an IC???
>
> By removing IC's from scrapped PCB's and
> (sometimes) desoldering the legs cleanly, and
> (sometimes) straighting the legs, and
> (soemtimes) UV erasing the memory contents for Eproms.
>
> Jim

I remember the scrappers used to mark IC's rfe (removed from equipment), I have never seen anything marked refurbished. I still have some in working equipment, so until they break the parts won't be available from me.
thanks, John.
KC5DWD

3679. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 00:22:55 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <pkk2dvkn2fikrpqg5033ragq5hgskn2565@4ax.com>
Source record: 35262

On Sat, 24 May 2003 23:37:52 GMT, Bill Janssen <billj@ieee.org> wrote:

>
>Another thought.
>
>Give up on the magnetron and use a klystron.

What advantage would that offer, Bill?

3680. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 01:27:20 UTC
From: BH <radiobillx@xgbronline.com>
Message-ID: <3ED16D78.1060906@xgbronline.com>
Source record: 35291
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Do us all a favor and take the rec.antiques.radio+phono group out
of your postings, we aren't interested in your rantings.

news2020 wrote:
> Keep your foul language to yourself. No one is forcing you to read anything.
> Perhaps it is a manifestation of a guilt complex of participating somehow in
> similar vocations.

3681. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:11:23 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193b17a7aecd2542989684@news-central.giganews.com>
Source record: 35284
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

In article <MPG.193aa9b7c876197a989680@news-central.giganews.com>,
jmiles@pop.removethistomailme.net says...

> I don't care who picks this gear up, as long as it all finds a good
> home. IF IT'S STILL THERE TOMORROW MORNING, THE GARBAGE MAN GETS IT.
>

Still here at 7 PM local time. Let's hope I don't have the same garbage
man as Dilbert, or the fate of the free world could hang in the
balance...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3682. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:16:07 UTC
From: Phil Nelson <philnelson@antiqueradio.orgNOSPAM>
Message-ID: <HNeAa.15662$rO.1423650@newsread1.prod.itd.earthlink.net>
Source record: 35285
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Sorry, Phil is not capable of lifting 100 lbs of anything these days. Had a run-in with a truckload of fresh compost and a roto-tiller in our veg garden, and my back came out the loser. I guess that's why they recommend you exercise more often than once a year :-(

"Steven Dinius" <10kc@fmtc.com> wrote in message news:vd2a4tpae4tu6f@corp.supernews.com...
> Can Phil pick it up and redistribute it?

3683. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:29:53 UTC
From: Tweetldee <dgmason99@att99.net>
Message-ID: <B_eAa.98378$cO3.6876577@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35286

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:vd2j8etldoaj3b@corp.supernews.com...
> Provided all three panels are of the same type and are located in the
> same sun exposure you can simply parallel them and use one diode to
> prevent the battery from discharging into them when in the dark. No
> need for equalizing resistors because the panels are current limited.
>
> I would look for a charge controller designed for use with solar
> panels rather than trying to use an automotive regulator. You'll find
> a bunch of them with an Internet search. You might also look at
> http://www.seslogic.com/microm.html for some inexpensive controllers.
> Series controllers develop less heat than parallel controllers but you
> have to be careful that they do not generate RFI that might get into
> your receiver (many of the series mode units utilize switch mode power
> supplies to generate the gate voltage for the switch FETs - the Mico-M
> does not).
>
>

Electronic Goldmine has a solar charger that will handle up to 150W of charging. http://sales.goldmine-elec.com/prodinfo.asp?prodid=6132 at only $8.95 US. I have one in use right now, and it works beautifully on my system. Goldmine gives you everything you need to hook it up and adjust it to your solar panel and battery pack. Good deal.

--
Tweetldee
Tweetldee at att dot net (Just subsitute the appropriate characters in the address)

Time is what keeps everything from happening all at once.

3684. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:34:35 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd2rpjapc1vv7e@corp.supernews.com>
Source record: 35283
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Oh God...just killfile the crazy bastard! We had a brough-haha about radiation killing him a few months ago and he's STILL ALIVE. Every SINGLE LAST ONE OF YOU ON EVERY GROUP INVOLVED--KILLFILE (BLOCK) HIM AND REMOVE ALL OTHER GROUP REFERENCES FROM NOW ON IF YOU DO REPLY.

Jesus saves and killfiling save your sanity.

"Chuck Harris" <cfharris@erols.com> wrote in message news:barfc7fre1@bob.news.rcn.net...
> Do you even have the slightest idea what it is you are trying to say?
> No one else does.
>
> -Chuck
>
> news2020 wrote:
> > Evidence. People are getting wiser. I have seen a lot of moving around here
> > (#1053, etc). A lot of people seem to be carrying backpacks with multiple
> > pockets, etc. and also other square bags, etc. Many of the devices seem to
> > be quite compact and portable. The older heavier and bigger items are a dead
> > giveaway and pose an exposure risk and possible liability. These Taiwanese
> > and US Chinese etc seem to be working with computerized compact devices
> > built into cars, microwave ovens, rice cooker type of devices, etc. Looks
> > like Seattle and some others here are a liitle behind in the
> > miniaturization.
> >
> > "Spehro Pefhany" <speff@interlog.com> wrote in message
> > news:fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com...
> >
> >>On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
> >><jmiles@pop.removethistomailme.net> wrote:
> >>
> >>
> >>>OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> >>>test gear. This equipment is in good working order. It was all used on
> >>>my bench at one time or another, but has since been replaced and is too
> >>>big/heavy/fragile/cheap to be worth hawking on the 'Bay.
> >>>

> >>>READ CAREFULLY: The following WORKING equipment will be placed BEHIND
> >>>the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle
> >>>eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN.
> >>>THIS IS HEAVY STUFF.
> >>>
> >>>-------------
> >>>
> >>>- Two Polarad klystron-based UHF/microwave signal generators, similar
to
> >>>http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG. Both
> >>>are clean and in excellent working condition. Coverage between them is
> >>>approximately 800 MHz - 4 GHz continuous with FM and CW modulation. I
> >>>believe I have at least one manual for these units (they're identical
> >>>except for frequency coverage).
> >>
> >>Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
> >>to burn..
> >>
> >>Best regards,
> >>Spehro Pefhany
> >>--
> >>"it's the network..." "The Journey is the
reward"
> >>speff@interlog.com Info for manufacturers:
> >
> > http://www.trexon.com
> >
> >>Embedded software/hardware/analog Info for designers:
> >
> > http://www.speff.com
> >
> >
>

3685. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:35:43 UTC
From: "M.M." <junquemaile@cox.net>
Message-ID: <Xns9386C76253AA7nobodynowhere@68.6.19.6>
Source record: 35287

Tweetldee wrote:
>
> Electronic Goldmine has a solar charger that will handle up to 150W of
> charging. http://sales.goldmine-elec.com/prodinfo.asp?prodid=6132 at
> only $8.95 US. ...

I second this suggestion. I also have one and it works just fine. I've seen these on Ebay for about $30 so this is a good deal.

Usual disclaimer...no connection except as a paying customer....

Mark

3686. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:37:28 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3ED17EE7.3A7FE797@ieee.org>
Source record: 35288

Paul Burridge wrote:

> On Sat, 24 May 2003 23:37:52 GMT, Bill Janssen <billj@ieee.org> wrote:
>
> >
> >Another thought.
> >
> >Give up on the magnetron and use a klystron.
>
> What advantage would that offer, Bill?

A klystron would be easier to build, especially for 500 MHz. It is built
so as the electrons flow in a straight line. The electron beam goes
through two cavities.
One is the input and the other is the output. If you couple these together
you get an
oscillator. Or you can make a reflect oscillator where the beam goes
through one cavity
Is reversed by a high negative voltage on a "repeller" electrode and the
goes through the cavity
in the reverse direction.

Cavity sizes and voltages can be selected for whatever frequency you want.

Bill K7NOM

3687. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 02:41:34 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3ED17FD7.1593304E@rica.net>
Source record: 35289

funkbastler wrote:
>
> On Sun, 25 May 2003 18:56:29 GMT, John Popelish <jpopelish@rica.net>
> wrote:
> >
> >Since the charge current is limited to 6 amps, a shunt regulator that
> >dumps up to 100 watts (6 amps times 13.8 volts) would not waste any
> >voltage during charging. You could make one of these with power
> >transistor or fet driving a lamp bank that draws about 6 amps max.
> >You would need a low power opamp and voltage reference to test the
> >battery voltage and adjust the load bank current to keep the voltage
> >from exceeding the batteries safe charging voltage.
> >
>
> Ahhh.... but then I have to go designing and building things ;-)

But this is where the fun is.

> I kinda like the idea of using an automotive regulator (which are
> series regulators, I think). That way, if it ever quits, I can
> just replace the whole thing at virtually no, or at least very
> little, cost. I understand that such a setup would either be
> charging or not charging (i.e. no "charging just a little" if the
> battery voltage is down just a bit), but considering battery
> capacity and projected load, that's not a concern.
>
> Is there any reason not to do it that way?

An automotive regulator uses considerable power at all times it is in
operation (even when it is dark, in this case). Their design is not
concerned with wasted power.

A three terminal voltage regulator chip might do the job, and these
are available in multi amp versions (up to 5 amps, I think) but they
waste 2 or 3 volts so you will get reduced output from your solar
cells.

--
John Popelish

3688. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 03:06:42 UTC
From: news2020 <user1025@att.net>
Message-ID: <6xfAa.98448$cO3.6880165@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35290
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Keep your foul language to yourself. No one is forcing you to read anything. Perhaps it is a manifestation of a guilt complex of participating somehow in similar vocations.

"Steven Dinius" <10kc@fmtc.com> wrote in message news:vd2rpjapc1vv7e@corp.supernews.com...
> Oh God...just killfile the crazy bastard! We had a brough-haha about
> radiation killing him a few months ago and he's STILL ALIVE. Every SINGLE
> LAST ONE OF YOU ON EVERY GROUP INVOLVED--KILLFILE (BLOCK) HIM AND REMOVE ALL
> OTHER GROUP REFERENCES FROM NOW ON IF YOU DO REPLY.
>
> Jesus saves and killfiling save your sanity.
>
> "Chuck Harris" <cfharris@erols.com> wrote in message
> news:barfc7fre1@bob.news.rcn.net...
> > Do you even have the slightest idea what it is you are trying to say?
> > No one else does.
> >
> > -Chuck
> >
> > news2020 wrote:
> > > Evidence. People are getting wiser. I have seen a lot of moving around
> here
> > > (#1053, etc). A lot of people seem to be carrying backpacks with
> multiple
> > > pockets, etc. and also other square bags, etc. Many of the devices seem
> to
> > > be quite compact and portable. The older heavier and bigger items are a
> dead
> > > giveaway and pose an exposure risk and possible liability. These
> Taiwanese
> > > and US Chinese etc seem to be working with computerized compact devices
> > > built into cars, microwave ovens, rice cooker type of devices, etc.
> Looks
> > > like Seattle and some others here are a liitle behind in the
> > > miniaturization.
> > >
> > > "Spehro Pefhany" <speff@interlog.com> wrote in message
> > > news:fp82dvks2kgke86bi42r4qt5bhlu8vlbbh@4ax.com...

> > >
> > >>On Sun, 25 May 2003 11:22:38 -0700, the renowned John Miles
> > >><jmiles@pop.removethistomailme.net> wrote:
> > >>
> > >>
> > >>>OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> > >>>test gear. This equipment is in good working order. It was all used
> on
> > >>>my bench at one time or another, but has since been replaced and is
too
> > >>>big/heavy/fragile/cheap to be worth hawking on the 'Bay.
> > >>>
> > >>>READ CAREFULLY: The following WORKING equipment will be placed BEHIND
> > >>>the condo unit at 10126 NE 63rd Street in Kirkland, Washington
(Seattle
> > >>>eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN.
> > >>>THIS IS HEAVY STUFF.
> > >>>
> > >>>-------------
> > >>>
> > >>>- Two Polarad klystron-based UHF/microwave signal generators, similar
> to
> > >>>http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG.
Both
> > >>>are clean and in excellent working condition. Coverage between them
is
> > >>>approximately 800 MHz - 4 GHz continuous with FM and CW modulation.
I
> > >>>believe I have at least one manual for these units (they're identical
> > >>>except for frequency coverage).
> > >>
> > >>Cool! Too bad it's 2,500 miles away. I wonder if it emits enough power
> > >>to burn..
> > >>
> > >>Best regards,
> > >>Spehro Pefhany
> > >>--
> > >>"it's the network..." "The Journey is the
> reward"
> > >>speff@interlog.com Info for manufacturers:
> > >>
> > > http://www.trexon.com
> > >>
> > >>Embedded software/hardware/analog Info for designers:
> > >>
> > > http://www.speff.com
> > >>
> > >>
> > >>
> >
>

>

3689. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 03:35:23 UTC
From: news2020 <user1025@att.net>
Message-ID: <%XfAa.98507$cO3.6882486@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35292
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

My apologies to boat anchors and all antiques collectors (are they really
off loading all the kook stuff fast before people discover the perfidy ?).

"BH" <radiobillx@xgbronline.com> wrote in message
news:3ED16D78.1060906@xgbronline.com...
>
> Do us all a favor and take the rec.antiques.radio+phono group out
> of your postings, we aren't interested in your rantings.
>
> news2020 wrote:
> > Keep your foul language to yourself. No one is forcing you to read
anything.
> > Perhaps it is a manifestation of a guilt complex of participating
somehow in
> > similar vocations.
>

3690. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 04:23:48 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3ED195E3.4090909@socal.rr.com>
Source record: 35293
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Chuck Harris wrote:
> Do you even have the slightest idea what it is you are trying to say?
> No one else does.
>
> -Chuck
>
> news2020 wrote:
>
>> Evidence. People are getting wiser.

Hey Chuck, you must have missed it earlier when news2020 was
going on about radiation burns from his neighbors DishTV antenna.

He's definately a candidate for the Marie-Calendar pie tin on
the head.

Jeff

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

3691. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 04:26:39 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3ED1968E.4060706@socal.rr.com>
Source record: 35294
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

news2020 wrote:
> Keep your foul language to yourself. No one is forcing you to read anything.
> Perhaps it is a manifestation of a guilt complex of participating somehow in
> similar vocations.

Dude, it's time for your medication again.
Try upping the dosage, it's apparently NOT working.

JEff

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

3692. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 05:00:26 UTC
From: Jamie Morken <truespace1@hotmail.com>
Message-ID: <KbhAa.79018$Vi5.2202530@news1.calgary.shaw.ca>
Source record: 35295
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

"Winfield Hill" <whill@picovolt.com> wrote in message
news:barl7d0sn1@drn.newsguy.com...
> >news2020 wrote:
> >> Evidence. People are getting wiser. I have seen a lot of moving around
here
> >> (#1053, etc). A lot of people seem to be carrying backpacks with
multiple
> >> pockets, etc. and also other square bags, etc. Many of the devices seem
to
> >> be quite compact and portable. The older heavier and bigger items are a
dead
> >> giveaway and pose an exposure risk and possible liability. These
Taiwanese
> >> and US Chinese etc seem to be working with computerized compact devices
> >> built into cars, microwave ovens, rice cooker type of devices, etc.
Looks
> >> like Seattle and some others here are a liitle behind in the
> >> miniaturization.
>
> Chuck wrote...
> >
> > Do you even have the slightest idea what it is you are trying
> > to say? No one else does.
>
> Maybe not, but it's a pretty fascinating view of the universe,
> where many of the simple humdrum items of our routine lives take
> on a mystical, almost magical quality.

Yes, but remember the old saying: "fly to close to the sun and you will get
burned" or something to that effect anyways.

>
> Thanks,
> - Win
>

3693. Looking for a Datasheet of a 7x7x9mm IF-LC-Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 05:49:02 UTC
From: Markus Wolfgart <xx_markus.wolfgart@dlr.de>
Message-ID: <3ED1AACE.5010003@dlr.de>
Source record: 35296

Hi NG,

I'm looking for info's concerning a small IF-LC
filter probably for 10,7MHz labeled with three
color points red, black, pink and the number
99059. The small ceramic condensator has a value
of 80pF and the inductor on this side a value of
3uH. The opposite placed inductor has a value
of 30uH. The filter has five pins and four of these
pins are used.
All inductors (all pins) are dc coupled and the
measured maximum resistance is about 6 ohms.

What for my looks a bit funny is the way like
the inductor is wounded on the body, have never
seen such winding technique before.

Would be nice if You could point my to a link
where to get some detailed info's about these filter
or give me some explanations on this kind
of filter/diskriminator or what else it could be.

Many thanks in advance

Markus
DL8MBY

==========

Markus Wolfgart

DLR

==========
PS.: remove the xx_ from email adr. to reply
==========

3694. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 07:20:38 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <n0g3dv49hqu2lvrn3p9knuaunpl86alunh@4ax.com>
Source record: 35200

>Ahhh.... but then I have to go designing and building things ;-)

Are you a cb'er or sumit ?

Clive

3695. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 07:42:57 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd3drtbmrk723a@corp.supernews.com>
Source record: 35197
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

garbage man won't come on a HOLIDAY...HURRY!

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:MPG.193b17a7aecd2542989684@news-central.giganews.com...
> In article <MPG.193aa9b7c876197a989680@news-central.giganews.com>,
> jmiles@pop.removethistomailme.net says...
>
> > I don't care who picks this gear up, as long as it all finds a good
> > home. IF IT'S STILL THERE TOMORROW MORNING, THE GARBAGE MAN GETS IT.
> >
>
> Still here at 7 PM local time. Let's hope I don't have the same garbage
> man as Dilbert, or the fate of the free world could hang in the
> balance...
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3696. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 07:47:16 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd3e3rnn66bud6@corp.supernews.com>
Source record: 35198
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

It would take all day for me to get there and I have a mid-sized sedan. I wouldn't have gas to get much past The Dalles or return.

Hey, who else is around Portland that could get it?

I've been to Aberdeen but haven't been to Seattle since '92 (in a college van) so I'm not much on directions.

"Phil Nelson" <philnelson@antiqueradio.orgNOSPAM> wrote in message news:HNeAa.15662$rO.1423650@newsread1.prod.itd.earthlink.net...
> Sorry, Phil is not capable of lifting 100 lbs of anything these days. Had a
> run-in with a truckload of fresh compost and a roto-tiller in our veg
> garden, and my back came out the loser. I guess that's why they recommend
> you exercise more often than once a year :-(
>
> "Steven Dinius" <10kc@fmtc.com> wrote in message
> news:vd2a4tpae4tu6f@corp.supernews.com...
> > Can Phil pick it up and redistribute it?
>
>

3697. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 07:51:38 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd3ec3ntcekj8c@corp.supernews.com>
Source record: 35199
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

You are crossposting! Check the header.

Please eliminate other groups from further posting. Thank you.
"Jamie Morken" <truespace1@hotmail.com> wrote in message
news:KbhAa.79018$Vi5.2202530@news1.calgary.shaw.ca...
>
> "Winfield Hill" <whill@picovolt.com> wrote in message
> news:barl7d0sn1@drn.newsguy.com...
> > >news2020 wrote:
> > >> Evidence. People are getting wiser. I have seen a lot of moving
around
> here
> > >> (#1053, etc). A lot of people seem to be carrying backpacks with
> multiple
> > >> pockets, etc. and also other square bags, etc. Many of the devices
seem
> to
> > >> be quite compact and portable. The older heavier and bigger items are
a
> dead
> > >> giveaway and pose an exposure risk and possible liability. These
> Taiwanese
> > >> and US Chinese etc seem to be working with computerized compact
devices
> > >> built into cars, microwave ovens, rice cooker type of devices, etc.
> Looks
> > >> like Seattle and some others here are a liitle behind in the
> > >> miniaturization.
> >
> > Chuck wrote...
> > >
> > > Do you even have the slightest idea what it is you are trying
> > > to say? No one else does.
> >
> > Maybe not, but it's a pretty fascinating view of the universe,
> > where many of the simple humdrum items of our routine lives take
> > on a mystical, almost magical quality.
>
> Yes, but remember the old saying: "fly to close to the sun and you will
get
> burned" or something to that effect anyways.
>
> >

> > Thanks,
> > - Win
> >
>
>

3698. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 08:20:39 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305260020.77c838ea@posting.google.com>
Source record: 35201

c.a.m@antispam.blueyonder.co.uk wrote in message
news:<0kfucv8ol3nrg9doaued7vk3g90frm1iaa@4ax.com>...
> Hi.
>
> Does anyone know the formula for drawing out a single petal for parabolic dish
> at all ?

I assume you mean how to draw an outline for a piece you'd cut from
flat stock so that N of those pieces stitched together along the edges
would form a parabolic reflector. Shouldn't be difficult to derive.
Did you want it for a particular N or more generalized? Did you want
it for a specific diameter-to-focal length ratio, or generalized? The
biggest difficulty I see is that if each petal has only simple
curvature and not compound, you'd want to adjust the edges so as to
minimize the error in some way, since the result won't be a perfect
paraboloid. With large enough N, that wouldn't matter.

Cheers,
Tom

3699. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 09:11:33 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <yOlAa.549$5u6.139043@newsfep1-win.server.ntli.net>
Source record: 35203
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

> >What about the RSGB VHF-UHF manual? Or don't they do it any more?
> >Perhaps a little too advanced for the current membership base.

> I can only assume it's no longer available. :-(
==========
FYI ,I have the RSGB VHF/UHF Manual by George Jessop . G6JP 'SK' ,4th edition ,reprinted 1992.

In the mid 90s RSGB sold it off cheaply ,due to publication of a new manual.

The 4th edition includes both valve and semiconductor designs ,perhaps not involving up to date technology ,but still very useful for radio amateurs and as such still a treasure.

Frank gm0csz.kn6wh@ntlworld.com

3700. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 09:20:47 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <AOlAa.550$5u6.139043@newsfep1-win.server.ntli.net>
Source record: 35204

> They have them listed as $4.95 each and have copies of the documentation
> on-line. They list them as "refurbished" and I have no idea what that
> means for an IC. How does one "refurbish" an IC??? ;)
==========
Erase EPROM with UV and re-program.

Frank GM0CSZ / KN6WH

3701. Re: Homemade vacuum tube???

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 09:26:30 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0305260126.75349f0d@posting.google.com>
Source record: 35202

Hi all,
20 years ago I had an opportunity to see the inside of a 750 000 watt medium wave AM transmitter. In the modulator and PA there were together five water cooled triodes, about 130 cm high copper-and-glass beasts. The pipes (hundreds of litres of distilled water inside) and coils made of thick silver-coated tubing were simply amazing. BTW, the manufacturer recommended to use two such transmitters via a combiner on one antenna, i.e. 1,5 megawatt of continous RF power...

BR from Ivan

3702. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 10:09:30 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <AOlAa.551$5u6.139043@newsfep1-win.server.ntli.net>
Source record: 35205

> A couple of questions:
> 1. To connect the panels in parallel, should I use
> a blocking diode on each panel with the diode outputs
> connected, or tie all the panels together and just use
> one diode? Either way, is any sort of equalizing resistor
> advisable?
>
> 2. What's good for a cheap and easy charge controller?
> I'm thinking about just using something based on a rather
> generic (aka Ford) type automotive regulator.
>
> I expect my transmit duty cycle to be something like 10
> minutes every couple of days, so I have power to burn here.
> So if I need to heat up some equalizing resistors, or waste
> some power driving an electromechanical regulator or a relay
> or two, it's not a big deal.
==========
On the assumtion you are charging Lead-Acid leisure (deep cycle) batteries :
1) Solar Panels usually have a reverse blocking diode included . If not fit
1 diode in series with each panel .

2) Depending on the nominal panel voltage output you might not need a charge
regulator ,meaning that at full sunlight the output voltage might not get
above 13.8 V (or 13.5 V when using sealed batteries) .
Note : I am using solar panels with a nominal full output voltage of 16
Volt., hence a charge controller is required.
Also because I run the system in conjunction with a wind generator , I have
made a charge controller which limits the battery voltage to 13.8V.
This is done with an opamp used as a comparator with the inverted input
pegged to a zener voltage and the non-inverted input sensing a fraction of
the battery voltage . The opamp is driving a transistor which in turn
drives a number of power transistors . The load is based on a number of 12 V
car bulbs .
Any current generated which tends to increase battery voltage above 13.8 V
is dumped through the car bulbs.
Voltage control is +/- 20 mV.
A simple but effective system.
Please note the controller does not adjust charge voltage with changing
temperature, although this would optimise battery life.

Frank GM0CSZ / KN6WH

3703. HELP - HP8482A sensor repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 11:10:40 UTC
From: gcd <gcdnoSPAM@austarmetro.com.au>
Message-ID: <3ed1f62f@news.comindico.com.au>
Source record: 35206
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi all,
I 'm trying to repair an 8482A. I've removed the sensor assy and am trying to slide the substrate out of the cylinder, however it is held in place by 4 pins. These don't appear to be a hex key or other tamper proof tool, they appear to be press fit.

Any one provide some hints on getting these out so I can remove the substrate?

Thanks in advance
--
gcd AT austarmetro.com.au

Greg

3704. 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 11:26:13 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bastgb$37lp1$1@ID-150848.news.dfncis.de>
Source record: 35207
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I will use with my xtal controlled 2m TX.

Anybody any info on circuits, or know if there are any commercial or surplus boards out there I could make an rx with. I'm wanting to have different bandwith for the modes.

(Or, perhaps I could use an old Eddystone RX. (What was the model that covered VHF I think to myself out loud)).

I do have a MM 144/28 Mhz converter.

Rich.

3705. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 11:45:04 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <r4v3dvs1h25nuprb912mf830r67qnc8naq@4ax.com>
Source record: 35208

Hi Tom.

>I assume you mean how to draw an outline for a piece you'd cut from
>flat stock so that N of those pieces stitched together along the edges
>would form a parabolic reflector. Shouldn't be difficult to derive.
>Did you want it for a particular N or more generalized? Did you want
>it for a specific diameter-to-focal length ratio, or generalized? The
>biggest difficulty I see is that if each petal has only simple
>curvature and not compound, you'd want to adjust the edges so as to
>minimize the error in some way, since the result won't be a perfect
>paraboloid. With large enough N, that wouldn't matter.

Trouble is, I'm no mathematician :(

Yup, want to calculate the outline for cut outs from a flat sheet.

Needs to be able to deal with different F/D ratios along with being able to deal with differing number of petals.

A simple curvature for each petal is fine (so long as it's parabolic), not having a compound shape is ok, so long as I use enough petals the error won't make to much of a difference.

All I need to find is the formula, I'll then write a windows program to print out the shape and/or dimensions.

Have looked for ages on the net without success.

Clive

3706. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 11:51:05 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <cjv3dvo3pke3qqp48kcukqirtrlvifippc@4ax.com>
Source record: 35209

A way I'd use is to put together an efficient switched mode regulator (80% shouldn't be hard these days what with the available chips/fets around), one that can deal with lower than battery voltage input voltage - ie, to step up the solar panel output voltage to the required constant charge voltage needed by the lead acid batteries - or if their nicad then to provide enough voltage to constant current charge them.

If the solar panel voltage goes above battery voltage then switch to a 2nd regulator circuit (step down for lead acid, or simple constant current for nicad).

If you have plenty of spare power but the voltage is not quite enough, then simply wire 2 panels in series and use a simple step down regulator or constant current source.

Clive

3707. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 13:28:36 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <a7acnTTQK5t-i0-jRTvU3Q@ctc.net>
Source record: 35212

>
> Hi.
>
> Does anyone know the formula for drawing out a single petal for parabolic
dish
> at all ?
>
> Clive

Yes, but I can not sent a scanned image to your email address.
When requesting info please use an email address that is valid.

3708. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 13:35:05 UTC
From: William Sommerwerck <williams@nwlink.com>
Message-ID: <vd4611rr06go4d@corp.supernews.com>
Source record: 35213
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

This is an attempt at humor about the weight and bulk of older microwave equipment. I don't think it indicates any kind of mental imbalance -- at least, not by my standards.

> Evidence. People are getting wiser. I have seen a lot of moving around here
> (#1053, etc). A lot of people seem to be carrying backpacks with multiple
> pockets, etc. and also other square bags, etc. Many of the devices seem to
> be quite compact and portable. The older heavier and bigger items are a dead
> giveaway and pose an exposure risk and possible liability. These Taiwanese
> and US Chinese etc seem to be working with computerized compact devices
> built into cars, microwave ovens, rice cooker type of devices, etc. Looks
> like Seattle and some others here are a liitle behind in the miniaturization.

3709. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 13:51:37 UTC
From: Ian White <G3SEK@ifwtech.co.uk>
Message-ID: <Q7bOBJDpvh0+EAhZ@ifwtech.co.uk>
Source record: 35215
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hello Paul Burridge
>On Mon, 26 May 2003 10:11:33 +0100, "Frank Dinger"
><gm0csz.kn6wh@ntlworld.com> wrote:
>
>>> >What about the RSGB VHF-UHF manual? Or don't they do it any more?
>>> >Perhaps a little too advanced for the current membership base.
>>
>>> I can only assume it's no longer available. :-(
>>================
>>FYI ,I have the RSGB VHF/UHF Manual by George Jessop . G6JP 'SK' ,4th
>>edition ,reprinted 1992.
>
>Is this similar to the VHF/UHF DX book as mentioned elsewhere on this
>thread? I've checked out the contents of this and it seems a bit
>overly concerned with propagation and stuff, whearas I was more
>interested in seeing a decent range of practical circuits and
>projects.

Forgive me, but that isn't a totally accurate summary of the aims and contents of the book; and I wouldn't want other newsgroup readers to gain the wrong impression.

VHF/UHF DXing involves both technical *and* operating knowledge, and the book was written to meet that specific need.

After the general introduction, only two of the remaining 11 chapters are purely concerned with "operating and stuff". Another is about antennas, but all the rest are largely about "practical circuits and projects" and/or about understanding how they work.

If that mix of contents doesn't meet anyone's particular needs, then of course that's OK by me.

Picking up Roy's point about the ARRL VHF/UHF/Microwave Experimenter's Manual, that is a compilation of one-off articles and conference papers which are mostly technical background. There are very few projects in that book. However, there are now two companion Projects manuals, assembled in the same way. These compilation books probably represent the opposite approach to my own, in that they don't have any central theme.

As a result, most serious VHF/UHF/microwave experimenters end up with every book that's ever been published in the amateur press, plus a few professional books like Bowick's... and find each one of them useful in its own individual way.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3710. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 13:57:55 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3ed21cd5$0$192@news.impulse.net>
Source record: 35214

"funkbastler" <funkbastler@eudoramail.com> wrote in message
news:l5t1dvkrdjfvi3l3of548rdc7un124emb8@4ax.com...
> I have three solar panels, each of which will produce
> about two (2) amps at 12 volts in full sun. I'd like
> to use them to keep a 12-volt battery charged for my
> 2-meter transceiver, which draws 11 amps max during
> transmit.
>
> A couple of questions:
>
> 1. To connect the panels in parallel, should I use
> a blocking diode on each panel with the diode outputs
> connected, or tie all the panels together and just use
> one diode? Either way, is any sort of equalizing resistor
> advisable?

It's possible that a blocking diode is already in the panel assemblies. You might have the info in the panel documentation or it's possible you may be able to see it near the output terminals.
Most solar arrys I'm familiar with actually are diodes, but very leaky with reverse voltage. To prevent them from draining the battery when dark, a "good" diode is usually in circuit as part of the assembly.
I'm not sure what you want to equalize, but no resistor is needed.

-CB

3711. Systron Donner SA information needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 14:07:30 UTC
From: no.spam@no.spam
Message-ID: <3ed21f80.16925529@news.lin.foa.se>
Source record: 35077

Hi
does anyone have and data / specs on a
Systron Donner 762-1 Spectrum analyzer with 712-1 (standard) display
and a 809-1 plug in ...

Please drop me a line at:
lasse_at_sm5glc_dot_com
(spam prevention remove underscore and insert @)

Thanx
/Lasse SM5GLC

3712. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 14:15:19 UTC
From: nico@puntnl.niks
Message-ID: <3ed22131.26810671@news.planet.nl>
Source record: 35216
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Chuck Harris <cfharris@erols.com> wrote:

>news2020 wrote:
>> Evidence. People are getting wiser. I have seen a lot of moving around here
>> (#1053, etc). A lot of people seem to be carrying backpacks with multiple
>> pockets, etc. and also other square bags, etc. Many of the devices seem to
>> be quite compact and portable. The older heavier and bigger items are a dead
>> giveaway and pose an exposure risk and possible liability. These Taiwanese
>> and US Chinese etc seem to be working with computerized compact devices
>> built into cars, microwave ovens, rice cooker type of devices, etc. Looks
>> like Seattle and some others here are a liitle behind in the
>> miniaturization.
>>
>Do you even have the slightest idea what it is you are trying to say?
>No one else does.
>
>-Chuck

I think a 'Who cares?' is appropriate here :-)

--
Reply to nico@nctdevpuntnl (punt=.)
Bedrijven en winkels vind U op www.adresboekje.nl

3713. FS: TUBES, 1000's @ very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 14:56:45 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <ZUpAa.2162$2e.1224@fed1read04>
Source record: 35217
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list.

3714. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 15:02:30 UTC
From: Gary Peach <garypeach@btinternet.com>
Message-ID: <bataa6$hb6$1@hercules.btinternet.com>
Source record: 35218
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Paul Burridge" <redscar@waitrose.notformail.com> wrote in message
news:1qs4dv8t18g0c4ml7jhen6l5ftk34avkbm@4ax.com...
> On Mon, 26 May 2003 10:11:33 +0100, "Frank Dinger"
> <gm0csz.kn6wh@ntlworld.com> wrote:
>
> >> >What about the RSGB VHF-UHF manual? Or don't they do it any more?
> >> >Perhaps a little too advanced for the current membership base.
> >
> >> I can only assume it's no longer available. :-(
> >================
> >FYI ,I have the RSGB VHF/UHF Manual by George Jessop . G6JP 'SK' ,4th
> >edition ,reprinted 1992.
>
> Is this similar to the VHF/UHF DX book as mentioned elsewhere on this
> thread? I've checked out the contents of this and it seems a bit
> overly concerned with propagation and stuff, whearas I was more
> interested in seeing a decent range of practical circuits and
> projects.

What about "Microwave Technique"
by J H Shankland G8FM BSc and E D Hart MA, MIRE, AMBritIRE
Published by the Incorporated Radio Society of Great Britain
New Ruskin House, Little Russell Street, London, WC1,
General Editor John Clarricoats G6CL October 1947 :)

Gary7SLL

3715. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 15:55:41 UTC
From: news2020 <user1025@att.net>
Message-ID: <1OqAa.99067$cO3.6941701@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35219
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

That's another way of posting a threat to murder / Conspiracy to commit
murder.

"Jamie Morken" <truespace1@hotmail.com> wrote in message
news:KbhAa.79018$Vi5.2202530@news1.calgary.shaw.ca...
>
> "Winfield Hill" <whill@picovolt.com> wrote in message
> news:barl7d0sn1@drn.newsguy.com...
> > >news2020 wrote:
> > >> Evidence. People are getting wiser. I have seen a lot of moving
around
> here
> > >> (#1053, etc). A lot of people seem to be carrying backpacks with
> multiple
> > >> pockets, etc. and also other square bags, etc. Many of the devices
seem
> to
> > >> be quite compact and portable. The older heavier and bigger items are
a
> dead
> > >> giveaway and pose an exposure risk and possible liability. These
> Taiwanese
> > >> and US Chinese etc seem to be working with computerized compact
devices
> > >> built into cars, microwave ovens, rice cooker type of devices, etc.
> Looks
> > >> like Seattle and some others here are a liitle behind in the
> > >> miniaturization.
> >
> > Chuck wrote...
> > >
> > > Do you even have the slightest idea what it is you are trying
> > > to say? No one else does.
> >
> > Maybe not, but it's a pretty fascinating view of the universe,
> > where many of the simple humdrum items of our routine lives take
> > on a mystical, almost magical quality.
>
> Yes, but remember the old saying: "fly to close to the sun and you will
get
> burned" or something to that effect anyways.
>
> >

> > Thanks,
> > - Win
> >
>
>

3716. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 15:55:49 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <vmd4dv0ldo5eqov5fg15bacc7j09chmqco@4ax.com>
Source record: 35220

On Mon, 26 May 2003 08:20:38 +0100, c.a.m@antispam.blueyonder.co.uk
wrote:

>
>>Ahhh.... but then I have to go designing and building things ;-)
>
>Are you a cb'er or sumit ?
>
>Clive

Now THAT is the ultimate insult!

Designing is not a problem, cuz I can still find a pencil
and some paper, but building *is* a problem. Haven't seen
the surface of my work bench in several months - way too much
junk piled up on it, too lazy to clean it off ;-)

73,
Jim - WA5RRH

3717. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 15:55:54 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <9vd4dvktjl63jolr9g30ov22qtbn38tq4g@4ax.com>
Source record: 35221

Thanks for all the ideas and info - looks like the Ford
regulator is not the way to go.

Have ordered one of the controllers from Electronic Goldmine.
Looks like a cheap, simple solution to the problem.

73,
Jim - WA5RRH

3718. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 15:56:19 UTC
From: j999w@aol.com
Message-ID: <20030526115619.09886.00000338@mb-m26.aol.com>
Source record: 35222

>I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
>will use with my xtal controlled 2m TX.
>

Do you have a LOT of experience with buiding?

Might I suggest finding some older VHF equipment and tinkering with that? VHF
ciruits get mighty sensitive for those attempting to build their own.

jw
wb9uai

3719. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:02:18 UTC
From: news2020 <user1025@att.net>
Message-ID: <eUqAa.99075$cO3.6942664@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35223
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

This is a man who has posted abuses against me as well as conspiracy to commit murder, etc.

He is posting from London/UK which he thinks is a safe haven for hate-mongers / terrorists like himself.

He is probably funded by Church sources (religious faith funding type) or secret organizations run by Church sources or such kooks. He has posted lies and attacks pretty routinely.

It is time to bring such people to book for the crimes that they are committing without batting an eyelid.

"Paul Burridge" <redscar@waitrose.notformail.com> wrote in message news:jgt4dvcg0vlub1s41uort1g3o2913s6sdu@4ax.com...
> On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
> wrote:
>
> > Maybe not, but it's a pretty fascinating view of the universe,
> > where many of the simple humdrum items of our routine lives take
> > on a mystical, almost magical quality.
>
> Pyschiatrists actually refer to it as "magical thinking" and it's one
> of the chief symptoms of this disorder.

3720. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:05:25 UTC
From: news2020 <user1025@att.net>
Message-ID: <9XqAa.99076$cO3.6942941@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35224
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Try it yourself, just for kicks and tell us all what kind of effect it has
on body and brain.

If you get lost in the 'trip' too bad / have a good trip.

"Jeffrey D Angus" <jangus@socal.rr.com> wrote in message
news:3ED1968E.4060706@socal.rr.com...
> news2020 wrote:
> > Keep your foul language to yourself. No one is forcing you to read
anything.
> > Perhaps it is a manifestation of a guilt complex of participating
somehow in
> > similar vocations.
>
> Dude, it's time for your medication again.
> Try upping the dosage, it's apparently NOT working.
>
> JEff
>
> --
> "They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety." Benjamin Franklin
> "A life lived in fear is a life half lived."
> Tara Morice as Fran, from the movie "Strictly Ballroom"
>

3721. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:10:35 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <3ED23CE9.4030606@nospam.com>
Source record: 35225
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

John Miles wrote:
> OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> test gear. This equipment is in good working order. It was all used on
> my bench at one time or another, but has since been replaced and is too
> big/heavy/fragile/cheap to be worth hawking on the 'Bay.
>
> READ CAREFULLY: The following WORKING equipment will be placed BEHIND
> the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle
> eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN.
> THIS IS HEAVY STUFF.
>
>
It's *criminal* to throw that equipment out. There should be a surplus
outlet in your area that will handle it. Have you tried that?

3722. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:15:34 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <3ED23E13.2000003@nospam.com>
Source record: 35226
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Paul Burridge wrote:
> On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
> wrote:
>
>
>>Maybe not, but it's a pretty fascinating view of the universe,
>>where many of the simple humdrum items of our routine lives take
>>on a mystical, almost magical quality.
>
>
> Pyschiatrists actually refer to it as "magical thinking" and it's one
> of the chief symptoms of this disorder.

I disagree- there is nowhere near the level of complexity these people invent- and that is why I have said all along it is an act- he wants to be institutionalized or receive a disability check.

3723. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:18:18 UTC
From: news2020 <user1025@att.net>
Message-ID: <e7rAa.99085$cO3.6944394@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35227
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Those guys builder Pin removed the antenna after several complaints and lots of injuries over a long period of time and basically not allowing me into my bedroom without being burnt.

However, even though the claim is they have done what they could, another party ADT probably came in and installed another internal radar system with a horn under a missing top tile and also the chimney metal top. They continued the burning almost seamlessly while pretending to have stopped it ! It appears to be controlled by the Fire guys because I have seen them pay their respects every time they come nearby. The house is being rented and had several residents - 'white' young couple, latino, German, India-n/Pakistani now, etc. Quite obviously kook-house. The kooks control every square inch around here and can hypnoptise you and put you to sleep (with radiation beams, etc.) within a few seconds no matter where you are in this whole area. Outside the area, there are other means that can do the same thing. From there to instant death is only a small step ie. anyone can be killed at any time with the existing built up infrastructures which are continuing to be refined every day with the latest modulation and polarization etc. to escape detection. A vision of hell that no one seems to be aware of (even the kooks do not know most of it - they just run one instrument as told or allow their homes to be retrofitted with the killing/injuring/torture equipment, etc.) even aware of right around you.

"Jeffrey D Angus" <jangus@socal.rr.com> wrote in message news:3ED195E3.4090909@socal.rr.com...
>
>
> Chuck Harris wrote:
> > Do you even have the slightest idea what it is you are trying to say?
> > No one else does.
> >
> > -Chuck
> >
> > news2020 wrote:
> >
> >> Evidence. People are getting wiser.
>
> Hey Chuck, you must have missed it earlier when news2020 was
> going on about radiation burns from his neighbors DishTV antenna.
>
> He's definately a candidate for the Marie-Calendar pie tin on
> the head.
>
> Jeff

>
>
> --
> "They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety." Benjamin Franklin
> "A life lived in fear is a life half lived."
> Tara Morice as Fran, from the movie "Strictly Ballroom"
>

3724. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:19:21 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3ED23E33.4050402@attbi.com>
Source record: 35228
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Is it still there?
I live in Portland and will take the Spec any.
Bill Higdon
John Miles wrote:
> OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> test gear. This equipment is in good working order. It was all used on
> my bench at one time or another, but has since been replaced and is too
> big/heavy/fragile/cheap to be worth hawking on the 'Bay.
>
> READ CAREFULLY: The following WORKING equipment will be placed BEHIND
> the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle
> eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN.
> THIS IS HEAVY STUFF.
>
> -------------
>
> - Two Polarad klystron-based UHF/microwave signal generators, similar to
> http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG. Both
> are clean and in excellent working condition. Coverage between them is
> approximately 800 MHz - 4 GHz continuous with FM and CW modulation. I
> believe I have at least one manual for these units (they're identical
> except for frequency coverage).
>
> - One HP 8551B spectrum analyzer with two HP 851B display units, similar
> to http://www.fairradio.com/hp-851b.html. The 8551B and one of the
> 851Bs are very clean and in good working condition; the other 851B is in
> unknown condition. This includes the manuals and HP interconnect cable,
> but NOT the two BNC-BNC cables you'll need to connect the two units;
> these are easy to obtain just about anywhere. This is a really cool
> piece of gear that makes a very-serviceable spectrum analyzer for the 10
> MHz - 12 GHz range. Its only drawback is the fact that it weighs about
> 100 pounds and takes up a lot of bench space.
>
> - Maybe some more excess gear, too, depending on what I find in my
> storage unit. I dunno.
>
> -------------
>
> I don't care who picks this gear up, as long as it all finds a good
> home. IF IT'S STILL THERE TOMORROW MORNING, THE GARBAGE MAN GETS IT.
>
> Again, READ CAREFULLY: I WILL NOT BE HOME. THE GEAR WILL NOT BE
> AVAILABLE BEFORE 6 PM. DO NOT CALL ME, EMAIL ME, OR OTHERWISE HASSLE ME

> REGARDING THIS OFFER.
>
> ANY EMAIL I RECEIVE REGARDING THIS OFFER THAT SAYS ANYTHING OTHER THAN
> "Cool stuff! Thanks, dude!" WILL NOT BE ANSWERED.
>
> I WILL NOT BE ABLE TO RESERVE ANY EQUIPMENT FOR ANY PARTICULAR PERSON,
> OR MEDIATE ANY DISPUTES BETWEEN PARTIES. :) To the victor go the
> spoils!
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3725. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:20:14 UTC
From: news2020 <user1025@att.net>
Message-ID: <29rAa.99086$cO3.6944421@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35229
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

That's another way of posting a threat of bodily harm against someone who is
a total stranger and owes him nothing. Quite kooky.

"Fred Bloggs" <nospam@nospam.com> wrote in message
news:3ED23E13.2000003@nospam.com...
>
>
> Paul Burridge wrote:
> > On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
> > wrote:
> >
> >
> >>Maybe not, but it's a pretty fascinating view of the universe,
> >>where many of the simple humdrum items of our routine lives take
> >>on a mystical, almost magical quality.
> >
> >
> > Pyschiatrists actually refer to it as "magical thinking" and it's one
> > of the chief symptoms of this disorder.
>
> I disagree- there is nowhere near the level of complexity these people
> invent- and that is why I have said all along it is an act- he wants to
> be institutionalized or receive a disability check.
>

3726. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:23:28 UTC
From: news2020 <user1025@att.net>
Message-ID: <4crAa.99088$cO3.6944063@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35230
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

You can take the klystron too. Then no one can do anything much anyways.

"Bill Higdon" <w.higdon@attbi.com> wrote in message
news:3ED23E33.4050402@attbi.com...
> Is it still there?
> I live in Portland and will take the Spec any.
> Bill Higdon
> John Miles wrote:
> > OK, folks, I'm fixing to move, and I need to 'donate' some boatanchor
> > test gear. This equipment is in good working order. It was all used on
> > my bench at one time or another, but has since been replaced and is too
> > big/heavy/fragile/cheap to be worth hawking on the 'Bay.
> >
> > READ CAREFULLY: The following WORKING equipment will be placed BEHIND
> > the condo unit at 10126 NE 63rd Street in Kirkland, Washington (Seattle
> > eastside) at 6 PM tonight (May 25, 2003). BRING YOUR TRUCK OR VAN.
> > THIS IS HEAVY STUFF.
> >
> > -------------
> >
> > - Two Polarad klystron-based UHF/microwave signal generators, similar to
> > http://www.users.bigpond.com/i.foster/images/Polarad-1296-1a.JPG. Both
> > are clean and in excellent working condition. Coverage between them is
> > approximately 800 MHz - 4 GHz continuous with FM and CW modulation. I
> > believe I have at least one manual for these units (they're identical
> > except for frequency coverage).
> >
> > - One HP 8551B spectrum analyzer with two HP 851B display units, similar
> > to http://www.fairradio.com/hp-851b.html. The 8551B and one of the
> > 851Bs are very clean and in good working condition; the other 851B is in
> > unknown condition. This includes the manuals and HP interconnect cable,
> > but NOT the two BNC-BNC cables you'll need to connect the two units;
> > these are easy to obtain just about anywhere. This is a really cool
> > piece of gear that makes a very-serviceable spectrum analyzer for the 10
> > MHz - 12 GHz range. Its only drawback is the fact that it weighs about
> > 100 pounds and takes up a lot of bench space.
> >
> > - Maybe some more excess gear, too, depending on what I find in my
> > storage unit. I dunno.
> >
> > -------------
> >
> > I don't care who picks this gear up, as long as it all finds a good

> > home. IF IT'S STILL THERE TOMORROW MORNING, THE GARBAGE MAN GETS IT.
> >
> > Again, READ CAREFULLY: I WILL NOT BE HOME. THE GEAR WILL NOT BE
> > AVAILABLE BEFORE 6 PM. DO NOT CALL ME, EMAIL ME, OR OTHERWISE HASSLE ME
> > REGARDING THIS OFFER.
> >
> > ANY EMAIL I RECEIVE REGARDING THIS OFFER THAT SAYS ANYTHING OTHER THAN
> > "Cool stuff! Thanks, dude!" WILL NOT BE ANSWERED.
> >
> > I WILL NOT BE ABLE TO RESERVE ANY EQUIPMENT FOR ANY PARTICULAR PERSON,
> > OR MEDIATE ANY DISPUTES BETWEEN PARTIES. :) To the victor go the
> > spoils!
> >
> > -- jm
> >
> > ----------
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > ----------
>
>

3727. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:23:55 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <vrf4dvgu5969ci4bbju33e3bb08iaru0kl@4ax.com>
Source record: 35231

>>Are you a cb'er or sumit ?
>
>Now THAT is the ultimate insult!

Sorry lol

>Designing is not a problem, cuz I can still find a pencil
>and some paper, but building *is* a problem. Haven't seen
>the surface of my work bench in several months - way too much
>junk piled up on it, too lazy to clean it off ;-)

ahhh, I know the feeling well :(

Clive

3728. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:30:27 UTC
From: Z <zephod00@hotmail.com>
Message-ID: <3ED24123.4050509@hotmail.com>
Source record: 35232

Check out this site for ultra simple charge controller. A 2 hr max. project..... It works. I have used it for a couple of quick and dirty apps. The Red Rock Shunt2 design is even better but may take and afternoon or evening to put together. The Red Rock has lots of fascinating solar apps including using LEDs as light sensors. And they are definitely a DIY outfit.

Cheers,

Z

http://www.redrok.com/images/shunt1.gif

Bob Lewis (AA4PB) wrote:
> Provided all three panels are of the same type and are located in the
> same sun exposure you can simply parallel them and use one diode to
> prevent the battery from discharging into them when in the dark. No
> need for equalizing resistors because the panels are current limited.
>
> I would look for a charge controller designed for use with solar
> panels rather than trying to use an automotive regulator. You'll find
> a bunch of them with an Internet search. You might also look at
> http://www.seslogic.com/microm.html for some inexpensive controllers.
> Series controllers develop less heat than parallel controllers but you
> have to be careful that they do not generate RFI that might get into
> your receiver (many of the series mode units utilize switch mode power
> supplies to generate the gate voltage for the switch FETs - the Mico-M
> does not).
>
>

3729. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:48:19 UTC
From: Joshua P Luben <josh@ebard.net>
Message-ID: <3ed2454a$1@nntp0.pdx.net>
Source record: 35132
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Ramsey has VHF varacter tuned receiver kit. I bought one w/o the case for
$35 at Fry's.

josh

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bastgb$37lp1$1@ID-150848.news.dfncis.de...
> I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
> will use with my xtal controlled 2m TX.
>
> Anybody any info on circuits, or know if there are any commercial or
> surplus boards out there I could make an rx with. I'm wanting to have
> different bandwith for the modes.
>
> (Or, perhaps I could use an old Eddystone RX. (What was the model that
> covered VHF I think to myself out loud)).
>
> I do have a MM 144/28 Mhz converter.
>
> Rich.

3730. Re: HELP - HP8482A sensor repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:51:42 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <260520030951271724%silli_artie@hotmail.com>
Source record: 35233
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The Operation and Service Manual for the 8242 is available on the
Agilent website -- go to http://www.agilent.com and put 8242A in the
search box.

Namaste-

In article <3ed1f62f@news.comindico.com.au>, gcd
<gcdnoSPAM@austarmetro.com.au> wrote:

> Hi all,
> I 'm trying to repair an 8482A. I've removed the sensor assy and am trying
> to slide the substrate out of the cylinder, however it is held in place by 4
> pins. These don't appear to be a hex key or other tamper proof tool, they
> appear to be press fit.
>
> Any one provide some hints on getting these out so I can remove the
> substrate?
>
> Thanks in advance

3731. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 16:53:15 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <3ED246F6.5060207@nospam.com>
Source record: 35234
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

news2020 wrote:
> That's another way of posting a threat of bodily harm against someone who is
> a total stranger and owes him nothing. Quite kooky.

Right- you're probably already on a disability, and that's why you have
so much free time on your hands. Isn't there something you can do to
spice up your same old tired crap about radiation burns? You're getting
quite boring.

>
> "Fred Bloggs" <nospam@nospam.com> wrote in message
> news:3ED23E13.2000003@nospam.com...
>
>>
>>Paul Burridge wrote:
>>
>>>On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
>>>wrote:
>>>
>>>
>>>
>>>>Maybe not, but it's a pretty fascinating view of the universe,
>>>>where many of the simple humdrum items of our routine lives take
>>>>on a mystical, almost magical quality.
>>>
>>>
>>>Pyschiatrists actually refer to it as "magical thinking" and it's one
>>>of the chief symptoms of this disorder.
>>
>>I disagree- there is nowhere near the level of complexity these people
>>invent- and that is why I have said all along it is an act- he wants to
>>be institutionalized or receive a disability check.
>>
>
>
>

3732. Crystal radio variation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 17:54:18 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3ED254CA.9020009@hotmail.com>
Source record: 35235

I built a simple crystal radio over the weekend, and used an interesting alternative to the oldstyle high impedance headphones. I used a 500 ohm impedance CB microphone and an 8ohm/1000ohm RS transformer, and I got output. Faint, but there. In a quiet room if I listened carefully I could hear a basketball game on the local AM sports station. Any ideas for improving this, or sources for real high impedance speakers?

3733. Re: Crystal radio variation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 18:56:50 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <SrtAa.17652$lo.1569365@newsread2.prod.itd.earthlink.net>
Source record: 35238

Alex wrote:
> I built a simple crystal radio over the weekend, and used an interesting
> alternative to the oldstyle high impedance headphones. I used a 500 ohm
> impedance CB microphone and an 8ohm/1000ohm RS transformer, and I got
> output. Faint, but there. In a quiet room if I listened carefully I
> could hear a basketball game on the local AM sports station. Any ideas
> for improving this, or sources for real high impedance speakers?
>

Try hooking up a set of walkman headphones to the low Z side of the
transformer, with the heaphones wired in series. This should appear as
about 16K on the high Z side of the transformer.Wiring the headphones in
parallel should give you about 4k on the high Z side.

Adam

3734. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 19:05:27 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <XztAa.17658$Io.1570800@newsread2.prod.itd.earthlink.net>
Source record: 35239

funkbastler wrote:
> I have three solar panels, each of which will produce
> about two (2) amps at 12 volts in full sun. I'd like
> to use them to keep a 12-volt battery charged for my
> 2-meter transceiver, which draws 11 amps max during
> transmit.
>
> A couple of questions:
>
> 1. To connect the panels in parallel, should I use
> a blocking diode on each panel with the diode outputs
> connected, or tie all the panels together and just use
> one diode? Either way, is any sort of equalizing resistor
> advisable?
>
> 2. What's good for a cheap and easy charge controller?
> I'm thinking about just using something based on a rather
> generic (aka Ford) type automotive regulator.
>
> I expect my transmit duty cycle to be something like 10
> minutes every couple of days, so I have power to burn here.
> So if I need to heat up some equalizing resistors, or waste
> some power driving an electromechanical regulator or a relay
> or two, it's not a big deal.
>
> Thanks for your advise.
>
> Jim, WA5RRH

Use a blocking diode on each. Odds are the panels are not perfectly matched. I fooled around with SMALL scale photovoltaic cells some years ago and if one panel has a slightly ower voltage, you get problems. In your application, you can get real problems. I would just have one diode (heavy silicone rectifier type) on the positive (+) side of each cell. That way current goes from each cell to the battery / controler and NO OTHER WAY. Better safe tha sorry.

I also do not think the Ford Voltage regulator will do much good- it's made to send a signal back to the field coil of the alternator. I wish I could suggest a good controler. If I run into a good one in my books, I will post it here.

I was wondering what kind of battery you where going to use. I would say a car battery is a BAD idea. Car batteries are NOT made to be deep cycled. A few charge / discharge cycles could ruin it. Have you

considered a Marine battery- AC DELCO makes a number of large Marine Batteries with a high capacity and DESIGNED with deep cycling in mind. Any Murrays auto parts carries them and they could be able to look up a charge rate for you. If need be, I have a complete set of books here on car parts (I used to work for murrays and got the whole set when they threw out the old ones)- including the AC-Delco Marine Battery book.

Adam

3735. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 19:09:01 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <hDtAa.17666$Io.1570800@newsread2.prod.itd.earthlink.net>
Source record: 35240

c.a.m@antispam.blueyonder.co.uk wrote:
>>>Are you a cb'er or sumit ?
>>
>>Now THAT is the ultimate insult!
>
>
> Sorry lol
>
>
>>Designing is not a problem, cuz I can still find a pencil
>>and some paper, but building *is* a problem. Haven't seen
>>the surface of my work bench in several months - way too much
>>junk piled up on it, too lazy to clean it off ;-)
>
>
> ahhh, I know the feeling well :(
>
> Clive
>

I thought I was the only one :)

Adam

3736. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 20:34:31 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <N5vAa.13147$sJ4.7861@newsfep4-winn.server.ntli.net>
Source record: 35241
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bastgb$37lp1$1@ID-150848.news.dfncis.de...
> I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
> will use with my xtal controlled 2m TX.
>
> Anybody any info on circuits, or know if there are any commercial or
> surplus boards out there I could make an rx with. I'm wanting to have
> different bandwith for the modes.
>
> (Or, perhaps I could use an old Eddystone RX. (What was the model that
> covered VHF I think to myself out loud)).
>
> I do have a MM 144/28 Mhz converter.
>
> Rich.

I'd suggest using an old multimode CB (eg Cobra 148) with the 28MHz down converter. Then replace the VFO from the CB with a more suitable continuous tuning one. There is ,loads of info around on the net for pulling the Cobra up to 28MHz. Rip out as much of the TX strip as you can and dump the casings and front panel if regulation forbid the ownership of such a set in your country - something that could obviously not be made to transmit is not going to provoke a reaction from them.

That way all the Rx amplification, product detection et al is done. You'll have a working project off the ground quite quickly. Then you can replace successive parts of the circuitry of the old CB rig as and when you are able. Despite appearances most of the old multimode CB sets are quite logically laid out with all the RF strip together, all the VFO together etc. This lends itself nicely to the units being split into modules.

You will of course want to build a 28MHz first IF unit to reclaim your down-converter first.

--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

3737. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 20:40:37 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <1qs4dv8t18g0c4ml7jhen6l5ftk34avkbm@4ax.com>
Source record: 35210
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Mon, 26 May 2003 10:11:33 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> >What about the RSGB VHF-UHF manual? Or don't they do it any more?
>> >Perhaps a little too advanced for the current membership base.
>
>> I can only assume it's no longer available. :-(
>================
>FYI ,I have the RSGB VHF/UHF Manual by George Jessop . G6JP 'SK' ,4th
>edition ,reprinted 1992.

Is this similar to the VHF/UHF DX book as mentioned elsewhere on this
thread? I've checked out the contents of this and it seems a bit
overly concerned with propagation and stuff, whearas I was more
interested in seeing a decent range of practical circuits and
projects.

3738. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 20:40:38 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <jgt4dvcg0vlub1s41uort1g3o2913s6sdu@4ax.com>
Source record: 35211
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
wrote:

> Maybe not, but it's a pretty fascinating view of the universe,
> where many of the simple humdrum items of our routine lives take
> on a mystical, almost magical quality.

Pyschiatrists actually refer to it as "magical thinking" and it's one
of the chief symptoms of this disorder.

3739. Re: Crystal radio variation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 21:02:38 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3ed280f0$0$48903$edfadb0f@dtext02.news.tele.dk>
Source record: 35242

Hello Alex

> I built a simple crystal radio over the weekend, and used an interesting
> alternative to the oldstyle high impedance headphones. I used a 500 ohm
> impedance CB microphone and an 8ohm/1000ohm RS transformer, and I got
> output. Faint, but there. In a quiet room if I listened carefully I
> could hear a basketball game on the local AM sports station. Any ideas
> for improving this, or sources for real high impedance speakers?

Building crystal radioes is a lot of fun, I build my first 40 years ago and
they
still ameces me. Finding a real high impedance speaker is not easy, but
build your own, there is a great instruction on how to do it here

http://www.peeblesoriginals.com/crystal-loud-speaker.html

Btw. there is tons og stuff about crystal radios on the internet, quite at
big hobby these days.

Regards Max

3740. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 22:01:49 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <8k35dvoe2agfjp5cfv4idn53d7ognqk3ia@4ax.com>
Source record: 35243

Hi Ralph.

>Yes, but I can not sent a scanned image to your email address.
>When requesting info please use an email address that is valid.

Not sure if you got my email or not.

My email addy is c.a.m@blueyonder.co.uk

Thanks Ralph.

Clive

3741. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-26 23:20:46 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <dSadnSelZJ7NPE-jXTWcpA@comcast.com>
Source record: 35244
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Rich,

I don't know what you mean by "old" Eddistone, but the one I had occasion to use was from 195X, covered VHF, some UHF, beatifully made, and performed like a monumental POS. Had trouble picking up an FM station from 5 miles away. Don't recall if it would work on CW and SSB. Downconverter and HF radio sounds like a good way to save money.

Tam/WB2TT

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:bastgb$37lp1$1@ID-150848.news.dfncis.de...
> I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
> will use with my xtal controlled 2m TX.
>
> Anybody any info on circuits, or know if there are any commercial or
> surplus boards out there I could make an rx with. I'm wanting to have
> different bandwith for the modes.
>
> (Or, perhaps I could use an old Eddystone RX. (What was the model that
> covered VHF I think to myself out loud)).
>
> I do have a MM 144/28 Mhz converter.
>
> Rich.

3742. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 00:28:03 UTC
From: Z <zephod00@hotmail.com>
Message-ID: <3ED2B113.5020103@hotmail.com>
Source record: 35245

I have 4 electronics benches around the basement. It is often easier to build than clean. Besides cleaning off a work bench often leads to traumatic mental anguish... what to keep-what to throw away; leading to a brain freeze up where nothing gets done.....

Cheers,
Z

A. Trent Phillips wrote:
> c.a.m@antispam.blueyonder.co.uk wrote:
>
>>>> Are you a cb'er or sumit ?
>>>
>>>
>>> Now THAT is the ultimate insult!
>>
>>
>>
>> Sorry lol
>>
>>
>>> Designing is not a problem, cuz I can still find a pencil
>>> and some paper, but building *is* a problem. Haven't seen
>>> the surface of my work bench in several months - way too much
>>> junk piled up on it, too lazy to clean it off ;-)
>>
>>
>>
>> ahhh, I know the feeling well :(
>>
>> Clive
>>
>
> I thought I was the only one :)
>
> Adam
>

3743. Re: 6N7 good tube for a regen det ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 01:04:55 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ED2B9B7.5000606@bellsouth.net>
Source record: 35246
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Just about ANY triode (or pentode for that matter) will work fine
in a regen detector. Triodes usually work best with only 20-45 volts on the
plate, for pentodes make that on the screen grid. There is nothing
wrong with
using a higer plate SUPPLY voltage, just use a resistive plate load (50k
to 220K) and
adjust this value so you end up with somewhere betweeen 20 - 40 volts on
the PLATE.
The 6N7 is both a power tube and a high mu tube, but nothing wrong with
that.
Go to www.lindsaybks.com and look for his book on the twinplex regen
receiver.
This circuit uses a type 19 battery tube, but he shows a version using a
6SL7 tube that will
work fine with the 6N7.

A. Trent Phillips wrote:
> I am an SWL who has worked on tube rigs before. I have been inspired to
> build my own regenerative detector and have most of the parts. I was
> wondering if a 6N7 dual triode would make a good tube. I figured it
> would. I want to run the thing with 135 VDC on the plate. I am hoping to
> be able to work as high as the 16 meter broadcast band (just below 18
> MHz), but even 19 metres would be quite nice (below 16 MHz).
>
> So, 6N7, a good tube or not. I figured it seemed close to tubes used by
> hams before in similar apps including a VFO. It also looks to be a good
> rugged miltary metal tube in good supply (NOS US Army Signal Corps types
> are easily had for under $10)
>
> In the end I wish to use an Octal based tube becuase it seems more
> authentic (an easier to work with, and I have parts around) and would
> like to keep the plate voltage around 90 - 135 VDC to keep battery and
> power supply configuration simple.
>
> Thanks.
>
> Adam
>

3744. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 02:21:06 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <o3g5dv8sk20dh49sgo7t0net7qpn2us4fg@4ax.com>
Source record: 35236
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Mon, 26 May 2003 15:02:30 +0000 (UTC), "Gary Peach"
<garypeach@btinternet.com> wrote:

>What about "Microwave Technique"
>by J H Shankland G8FM BSc and E D Hart MA, MIRE, AMBritIRE
>Published by the Incorporated Radio Society of Great Britain
>New Ruskin House, Little Russell Street, London, WC1,
>General Editor John Clarricoats G6CL October 1947 :)

Er, yes. I'd prefer something a little more up-to-date, though!

3745. Re: UHF book recommendation wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 02:21:08 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <16g5dvscjloboqieugmln4vco1fjf19tc8@4ax.com>
Source record: 35237
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Mon, 26 May 2003 14:51:37 +0100, Ian White <G3SEK@ifwtech.co.uk>
wrote:

>Forgive me, but that isn't a totally accurate summary of the aims and
>contents of the book; and I wouldn't want other newsgroup readers to
>gain the wrong impression.
>
>VHF/UHF DXing involves both technical *and* operating knowledge, and the
>book was written to meet that specific need.

Yes, I'm sorry for the rather inaccurate synopsis, Ian. I'm sure it's
an excellent book for the majority of people who wish to try their
hand at DX on the higher frequency bands.
The other problem I face in selecting a suitable tome for my own
rather specific needs is the inabiltiy to flick through any possible
contenders. That's a major snag and one reason why I rarely resort to
mail order for books.

3746. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 02:27:53 UTC
From: VE3CWJ <"my callsign"@rac.ca>
Message-ID: <vd5j9q27g7fc0b@corp.supernews.com>
Source record: 35147

Programming 2708 is a little tricky now-a-days with newer programmers. These
old chips needed other voltages to program with, something like +21 or +25
volts if I remember correctly, plus a negative voltage. If you can find a
2758 instead, it is pin equivalent to 2708 but is programable with more of
the modern programmers out there (+12V I think, it has been a while).
I remember those 2708s from the old days of Altair computers, along with
those 17xx eproms....hi hi
Good luck
Steve
VE3CWJ

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:AOlAa.550$5u6.139043@newsfep1-win.server.ntli.net...
> > They have them listed as $4.95 each and have copies of the documentation
> > on-line. They list them as "refurbished" and I have no idea what that
> > means for an IC. How does one "refurbish" an IC??? ;)
> ==========
> Erase EPROM with UV and re-program.
>
> Frank GM0CSZ / KN6WH
>
>

3747. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 03:57:30 UTC
From: Stephen Quigg <steveq@bigtime.tip.csiro.au>
Message-ID: <slrnbd6v6q.bri.steveq@bigtime.tip.csiro.au>
Source record: 35148

In article <vd5j9q27g7fc0b@corp.supernews.com>, VE3CWJ wrote:
> Programming 2708 is a little tricky now-a-days with newer programmers. These
> old chips needed other voltages to program with, something like +21 or +25
> volts if I remember correctly, plus a negative voltage. If you can find a
> 2758 instead, it is pin equivalent to 2708 but is programable with more of
> the modern programmers out there (+12V I think, it has been a while).
> I remember those 2708s from the old days of Altair computers, along with
> those 17xx eproms....hi hi
> Good luck
> Steve
> VE3CWJ
>
>
As well as the multiple voltages, the programming was different. Each address
needed about 50ms programming time, but you could only hit each location with
about a 1ms pulse. And you couldn't just hit that location 50 times in
sucession, but had to go around ALL the addresses 50 times. But if you want a
REALLY complicated programming method, then the even earlier 1702's were
hard to beat!

> "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
> news:AOlAa.550$5u6.139043@newsfep1-win.server.ntli.net...
>> > They have them listed as $4.95 each and have copies of the documentation
>> > on-line. They list them as "refurbished" and I have no idea what that
>> > means for an IC. How does one "refurbish" an IC??? ;)
>> ==========
>> Erase EPROM with UV and re-program.
>>
>> Frank GM0CSZ / KN6WH
>>
>>
>
>

3748. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 05:25:52 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193c96a6cd98a581989685@news-central.giganews.com>
Source record: 35149
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

In article <3ED23CE9.4030606@nospam.com>, nospam@nospam.com says...
>
> It's *criminal* to throw that equipment out. There should be a surplus
> outlet in your area that will handle it. Have you tried that?

Beats me who it would be. The electronic surplus market in the Seattle area is nothing short of wretched. We have one decent component seller (RADAR Inc. in Bothell) and one high-priced, understocked, but nevertheless appreciated outlet (Vetco in Bellevue).

At any rate, I'm really not interested in hauling the HP 8551B analyzer around, but I was also totally bluffing when I threatened to let the garbage man have it. :) It is one of the most beautiful pieces of engineering I've ever seen, rivalling any of the great Tektronix instruments. The trouble is, although I used it quite a bit back in the early 90s, I've hauled it through my last three moves without even powering it up. That means it's time to pass it to someone who can actually use it. RADAR Inc. wouldn't be an appropriate venue, and Vetco would park it in a corner for the next twenty years with a $1,000 tag on it.

I was surprised, and more than a little bummed, when it sat out overnight after I cross-posted a "FREE!" notice to four newsgroups and three mailing lists. It's now been dragged back inside and promised to a fellow from Portland who emailed me this morning asking about it.

As for the Polarad generators, they're fine where they're at, sitting out in the rain behind my condo. I bought them NOS for $100 apiece several years ago. They're good if you need a drifty, noisy, unlevelled signal, but there are plenty of better (and lighter) alternatives available nowadays for very little money. Unlike the 8551B, I wouldn't lose any sleep over them.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3749. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 06:20:50 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0305262220.522df93b@posting.google.com>
Source record: 35150

Hi, you wrote:
> Radar was ideal and I rather suspect that beginning
> radar design was the impetus for the invention of the magnetron.

Not so. The magnetron (in its original form) was invented by Augustin
ï¿½ï¿½ček, professor of the Charles University in Prague, some eighty
years ago. Radiolocation was developed later, mainly during WWII.

BR from Ivan

3750. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 06:22:58 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0305262222.396d3284@posting.google.com>
Source record: 35151

I apologize for the non-printable Czech characters. I should have written "Zacek", read as "Zhacsek".

BR from Ivan

3751. Re: HELP - HP8482A sensor repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 07:34:40 UTC
From: gcd <gcdnoSPAM@austarmetro.com.au>
Message-ID: <3ed3150f@news.comindico.com.au>
Source record: 35152
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Namaste,
thanks for the link, I already have the manual - the issue with it is that
it treats the A1 assembly as a replaceable unit and does not describe any
repair / disassembly processes for it.
Thanks
Greg

"artie" <silli_artie@hotmail.com> wrote in message
news:260520030951271724%silli_artie@hotmail.com...
>
> The Operation and Service Manual for the 8242 is available on the
> Agilent website -- go to http://www.agilent.com and put 8242A in the
> search box.
>
> Namaste-
>
>
>
>
>
>
>
> In article <3ed1f62f@news.comindico.com.au>, gcd
> <gcdnoSPAM@austarmetro.com.au> wrote:
>
> > Hi all,
> > I 'm trying to repair an 8482A. I've removed the sensor assy and am
trying
> > to slide the substrate out of the cylinder, however it is held in place
by 4
> > pins. These don't appear to be a hex key or other tamper proof tool,
they
> > appear to be press fit.
> >
> > Any one provide some hints on getting these out so I can remove the
> > substrate?
> >
> > Thanks in advance

3752. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 09:13:18 UTC
From: "Master of the universer and supreme ruler of all living beings (but only when the wife is out)" <john.smith@micro$oft.com>
Message-ID: <bava1a$ln0$1@newstree.wise.edt.ericsson.se>
Source record: 35153
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

> I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
> will use with my xtal controlled 2m TX.
>
> Anybody any info on circuits, or know if there are any commercial or
> surplus boards out there I could make an rx with. I'm wanting to have
> different bandwith for the modes.

Hi Rich,
What you ask could be very simple. 70MHz is a standard overtone crystal frequency, something like http://w1.859.telia.com/~u85920178/rx/zn414-m1.gif but with slightly different coils in the oscillator - oscillates at 70MHz and outputs 140MHz.

Stuff this into a simple dual-gate FET, with antenna, just like TR2 in http://w1.859.telia.com/~u85920178/rx/tba120-rx-cct1.gif and you have made a 144MHz to 4MHz converter.

Now make your receiver for 4MHz to 5MHz = 144MHz to 145MHz.

http://w1.859.telia.com/~u85920178/rx/reflex_rx.htm is a cheap and simple AM receiver.
http://w1.859.telia.com/~u85920178/rx/quickrx.htm is an even simple SSB/CW receiver.
http://w1.859.telia.com/~u85920178/rx/regenrx.htm is also easy, but a little "fiddley" witht he coils.
http://w1.859.telia.com/~u85920178/rx/regen2.htm are more sensitive receivers.

If you like valves then why not consider
http://w1.859.telia.com/~u85920178/rx/cigarrx.htm or even
http://w1.859.telia.com/~u85920178/rx/tube-rx.htm

Yea! I know I am plugging my homepages
(http://w1.859.telia.com/~u85920178/) but I believe I am giving you a bit of good info.

BR Harry

3753. Re: Crystal radio variation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 09:15:52 UTC
From: "Master of the universer and supreme ruler of all living beings (but only when the wife is out)" <john.smith@micro$oft.com>
Message-ID: <bava62lpl1@newstree.wise.edt.ericsson.se>
Source record: 35154

> I built a simple crystal radio over the weekend, and used an interesting
> alternative to the oldstyle high impedance headphones. I used ...

You can still get the old HiZ headphones from http://www.tubesandmore.com
and they are just like the old "Brown Bros." you used to get in the 50's.
They do feel a bit "plastic-like" but they work and they even poach your
ears with sweat, just like the originals did.

BR H

3754. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 09:50:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bavc9d$3vlg4$1@ID-150848.news.dfncis.de>
Source record: 35155
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in
message news:N5vAa.13147$sJ4.7861@newsfep4-winn.server.ntli.net...

[...]

Alex

I never thought about using a CB radio as the tuneable IF, but I think
that could be the way to go. I'd probably have to alter the filter so
that it selectivity was suitable for the mode, and add a BFO obviously.

I think I might make another post on converting CB radios and see what
happens.

Rich.

3755. Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 09:59:45 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bavcqb$4433s$1@ID-150848.news.dfncis.de>
Source record: 35156
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Hi.

I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM 144/28 Mhz converter.

It's been suggested that for a 28 Mhx tuneable IF I could quite reasonably buy a CB radio and modify it.

Cobra 148 has been mooted as a possibility.

Any know of any other CB radios that make good modification projects?

I'm in UK by the way (If that makes a difference).

TIA.

Rich.

3756. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 10:58:41 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3ED344E1.4B1AA089@bloomer.net>
Source record: 35157
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

The only problem I see with the idea is that CB radios are channelized with a channel spacing of generally 10 KHz, so I wouldn't really consider it a "tunable IF". You will only be able to receive 40 discreet frequencies +/- some control if the rig has RIT. Now, on the other hand, if you intend to add a VFO to the CB rig, it should be OK. That seems like it would be a fair amount of work. If you have an HF rig, why not use it as the IF? If it's a general coverage HF radio, you can receive the entire 2M band. If transmit is the problem, most modern solid state rigs can be modified to transmit "out of band" so that you could transmit on the entire 2M band as well.

Scott
N0EDV

Richard wrote:
>
> Hi.
>
> I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
> 144/28 Mhz converter.
>
> It's been suggested that for a 28 Mhx tuneable IF I could quite
> reasonably buy a CB radio and modify it.
>
> Cobra 148 has been mooted as a possibility.
>
> Any know of any other CB radios that make good modification projects?
>
> I'm in UK by the way (If that makes a difference).
>
> TIA.
>
> Rich.

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3757. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 12:39:50 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3ED35C7A.6000002@tampabay.rr.com>
Source record: 35158
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

i would suggest finding a radio shack HTX 100 or HTX10 both are 10 meter
monile radios that you can pick up used for under $100 and you could
easily spend that much finding the right CB and getting it converted
also you should consider just buying a used older 2 meter all mode rig
like the kenwood TS700 which you can pick up for around $100 or more
depending on condition or the kenwood TM9000 is a 2 meter all mode
mobile radio that could he had cheap as well
good luck

3758. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 13:51:15 UTC
From: Terry King <terry@fredking.us>
Message-ID: <MPG.193d375da71ab98c98978e@news.newsguy.com>
Source record: 35159
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

> -- jm
Good for you! for making the effort to connect someone with real
electronics. If you keep on trying, eventually you'll get some
hits, and somebody who didn't even know what 'signal' really means
will get interested.

I learned more from scrounged stuff when I was a kid than I have
from lots of equipment I bought later.

--
Regards, Terry King ...In The Woods In Vermont
terry@fredking.us
The one who Dies With The Most Parts LOSES!! What do you need?

3759. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 15:15:54 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3ED380D5.90602@attbi.com>
Source record: 35160
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

The Chicken Banders (CBr's) have what they call a "slider", it's a vfo
to make them continious tunning. Check around (carefully) with some
truck drivers they can probably point you in the right direction.
Bill Higdon
Scott wrote:
> The only problem I see with the idea is that CB radios are channelized
> with a channel spacing of generally 10 KHz, so I wouldn't really
> consider it a "tunable IF". You will only be able to receive 40
> discreet frequencies +/- some control if the rig has RIT. Now, on the
> other hand, if you intend to add a VFO to the CB rig, it should be OK.
> That seems like it would be a fair amount of work. If you have an HF
> rig, why not use it as the IF? If it's a general coverage HF radio, you
> can receive the entire 2M band. If transmit is the problem, most modern
> solid state rigs can be modified to transmit "out of band" so that you
> could transmit on the entire 2M band as well.
>
> Scott
> N0EDV
>
> Richard wrote:
>
>>Hi.
>>
>>I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
>>144/28 Mhz converter.
>>
>>It's been suggested that for a 28 Mhx tuneable IF I could quite
>>reasonably buy a CB radio and modify it.
>>
>>Cobra 148 has been mooted as a possibility.
>>
>>Any know of any other CB radios that make good modification projects?
>>
>>I'm in UK by the way (If that makes a difference).
>>
>>TIA.
>>
>>Rich.
>
>

3760. Re: HI-POT TESTER

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 15:17:43 UTC
From: ^2@vc.net
Message-ID: <^2-2705030817430001@192.168.1.200>
Source record: 35161

In article <nRWxa.100$Pw6.60019@newsfep1-win.server.ntli.net>, "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote:

> You could use the HV supply from a _small_ TV set, with a long string of
> extra resistors on the HV output so
> > you don't get too much output current. Just an idea... It's not a precise
> 15kV, but nevertheless should be
> > 10kV .. 20kV or thereabouts.
> ==========
> Indeed a HV supply from a TV set or video monitor would do the trick
> Some time ago I was lucky to find a HIPOT tester make Danbridge at a surplus
> store (for equiv US $ 30) . It has such a HV power supply . Breakdown tests
> can be done at 1 - 10 and 100 microamps , adjustable Voltage Ranges : 3 - 10
> and 30 kV
> There was no HV cable/probe ,but I managed to make one with a banana plug
> and a length of HV cable as used in TV sets.
> Recently I obtained some spark plug cable (the old fashioned type with a
> multistrand copper conductor) which I also will try.
>
> Frank gm0csz.kn6wh@ntlworld.com

• the trouble with TV HV supplies is that they are not designed to have continuously adjustable output potential. Thus, a neon sign transformer powered by a variac is more versatile.

--
Rich, AG6K, 805 386 3734, www.vcnet.com/measures
remove ^ from e-mail address

3761. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 15:29:07 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <bb0085$3srg0$1@ID-134747.news.dfncis.de>
Source record: 35162
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

And, since the sun is going byebye for a few years
Radio Shack is getting out of the ten meter
business. The radios are being sold at $49.95.
That is not a lot of money, and the equipment is
"type accepted" for the intended purpose.

73 es cul

wb3fup
a Salty Bear

"Bill Higdon" <w.higdon@attbi.com> wrote in
message news:3ED380D5.90602@attbi.com...
> The Chicken Banders (CBr's) have what they call
a "slider", it's a vfo
> to make them continious tunning. Check around
(carefully) with some
> truck drivers they can probably point you in the
right direction.
> Bill Higdon
> Scott wrote:
> > The only problem I see with the idea is that
CB radios are channelized
> > with a channel spacing of generally 10 KHz, so
I wouldn't really
> > consider it a "tunable IF". You will only be
able to receive 40
> > discreet frequencies +/- some control if the
rig has RIT. Now, on the
> > other hand, if you intend to add a VFO to the
CB rig, it should be OK.
> > That seems like it would be a fair amount of
work. If you have an HF
> > rig, why not use it as the IF? If it's a
general coverage HF radio, you
> > can receive the entire 2M band. If transmit
is the problem, most modern
> > solid state rigs can be modified to transmit
"out of band" so that you
> > could transmit on the entire 2M band as well.
> >
> > Scott
> > N0EDV
> >

> > Richard wrote:
> >
> >>Hi.
> >>
> >>I'm wanting to make a 2 meter SSB/CW (and
possibly AM) RX. I have a MM
> >>144/28 Mhz converter.
> >>
> >>It's been suggested that for a 28 Mhx tuneable
IF I could quite
> >>reasonably buy a CB radio and modify it.
> >>
> >>Cobra 148 has been mooted as a possibility.
> >>
> >>Any know of any other CB radios that make good
modification projects?
> >>
> >>I'm in UK by the way (If that makes a
difference).
> >>
> >>TIA.
> >>
> >>Rich.
> >
> >
>
>

3762. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 16:18:49 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnbd73v8.cve.nobody@animas.frontier.net>
Source record: 35163
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Tue, 27 May 2003 10:59:45 +0100, Richard hath writ:
>
> I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
> 144/28 Mhz converter.
>
> It's been suggested that for a 28 Mhx tuneable IF I could quite
> reasonably buy a CB radio and modify it.

In addition to the other comments:

Depending on your location, the hi-power, hi-splatter bleed-through
from marble-mouthed CB `operators` with ampliofiers may make your
life miserable.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

3763. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 17:37:28 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305270937.78a41c29@posting.google.com>
Source record: 35164
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Gee, John, I didn't realize you were a "neighbor." And I was really hoping that you would have gotten a better response to this. I have some equipment that I really should get rid of too, and would like to find some decent homes for it. Some boatanchor type components, too...things like iron-core power transformers that I'd hate to just toss. No big plate transformers (other than one that's too high a voltage for most tubes), but quite a few lower-voltage things in the few VA up to perhaps around 300VA. But if you can't even get rid of nice test equipment, maybe it is time to start dumping. :-(

Cheers,
Tom

John Miles <jmiles@pop.removethistomailme.net> wrote in message news:<MPG.193c96a6cd98a581989685@news-central.giganews.com>...
> In article <3ED23CE9.4030606@nospam.com>, nospam@nospam.com says...
> >
> > It's *criminal* to throw that equipment out. There should be a surplus
> > outlet in your area that will handle it. Have you tried that?
>
> Beats me who it would be. The electronic surplus market in the Seattle
> area is nothing short of wretched. We have one decent component seller
> (RADAR Inc. in Bothell) and one high-priced, understocked, but
> nevertheless appreciated outlet (Vetco in Bellevue).
>
> At any rate, I'm really not interested in hauling the HP 8551B analyzer
> around, but I was also totally bluffing when I threatened to let the
> garbage man have it. :) It is one of the most beautiful pieces of
> engineering I've ever seen, rivalling any of the great Tektronix
> instruments. The trouble is, although I used it quite a bit back in the
> early 90s, I've hauled it through my last three moves without even
> powering it up. That means it's time to pass it to someone who can
> actually use it. RADAR Inc. wouldn't be an appropriate venue, and Vetco
> would park it in a corner for the next twenty years with a $1,000 tag on
> it.
>
> I was surprised, and more than a little bummed, when it sat out
> overnight after I cross-posted a "FREE!" notice to four newsgroups and
> three mailing lists. It's now been dragged back inside and promised to
> a fellow from Portland who emailed me this morning asking about it.
>
> As for the Polarad generators, they're fine where they're at, sitting
> out in the rain behind my condo. I bought them NOS for $100 apiece
> several years ago. They're good if you need a drifty, noisy, unlevelled

> signal, but there are plenty of better (and lighter) alternatives
> available nowadays for very little money. Unlike the 8551B, I wouldn't
> lose any sleep over them.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3764. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 17:47:28 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305270947.6361f81f@posting.google.com>
Source record: 35165

remove_ok1sip@atlas.cz (OK1SIP) wrote in message
news:<5f5159fa.0305262220.522df93b@posting.google.com>...
> Hi, you wrote:
> > Radar was ideal and I rather suspect that beginning
> > radar design was the impetus for the invention of the magnetron.
>
> Not so. The magnetron (in its original form) was invented by Augustin
> ?i¿½ček, professor of the Charles University in Prague, some eighty
> years ago. Radiolocation was developed later, mainly during WWII.
>
> BR from Ivan

However, as far as I know, the trick to making _high_power_output_
magnetrons came from the Brits at the beginning of WWII. See Robert
Buderi, "The Invention That Changed the World," ISBN 0-684-81021-2.
The high pulsed power output is clearly critical to practical radar
systems in those days. Certainly there was a lot of interest about
that time in finding ways to generate high power UHF pulses, and
finding ways to detect small signals at those frequencies.

Cheers,
Tom

3765. Re: ION GENERATOR!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 18:43:49 UTC
From: Chuck_McDevitt <Chuck_McDevitt@a-t-t-b-i.com>
Message-ID: <FIOAa.994442$3D1.582723@sccrnsc01>
Source record: 35166

"jos" <soj@sympatico.ca> wrote in message
news:3ED0D7F3.BAB0B387@sympatico.ca...
> I just purchased an air purifier for my shack with the option of
> "NEGATIVE ION" generation. The air cleaner uses a high voltage cell to
> attrac dust. Does anybody know a method to verify if the unit generates
> ions without opening the unit. The manual mention that the ions are
> generated from a needle point system and after a while the needle needs
> to be changed. Thanks! Jos VE2AUC

Can't you tell by smell? I can definitely smell the difference when the ion
generator is working.

3766. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 18:53:51 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.193d53e9c60a6bd0989686@news-central.giganews.com>
Source record: 35167
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

In article <3200347.0305270937.78a41c29@posting.google.com>,
k7itm@aol.com says...
> Gee, John, I didn't realize you were a "neighbor."

Cool, want some junk? :)

> And I was really
> hoping that you would have gotten a better response to this. I have
> some equipment that I really should get rid of too, and would like to
> find some decent homes for it. Some boatanchor type components,
> too...things like iron-core power transformers that I'd hate to just
> toss. No big plate transformers (other than one that's too high a
> voltage for most tubes), but quite a few lower-voltage things in the
> few VA up to perhaps around 300VA. But if you can't even get rid of
> nice test equipment, maybe it is time to start dumping. :-(

Well, in all fairness, maybe I shouldn't have expected instant
gratification from an ad posted six hours in advance of the 'deadline.'
Usenet isn't an instant-messaging medium, after all. Plenty of people
expressed interest, albeit from New York and New Zealand!

I've been playing with the 8551/851 for the past several hours; it's
amazing how well it works for something from the early-Apollo era. The
filament-voltage regulation is pretty crappy thanks to some germanium
transistors I never got around to replacing, but the electrolytics seem
to be holding up well and the exotic parts (BWO, IF cavity amplifier,
front-end mixer, CRT) are all still within or better than spec. It's
still got a couple of decades' worth of life in it, I think. Certainly
a much-better spectrum analyzer than the ones people are building with
CATV tuners and the like.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3767. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 18:57:22 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3ED3B4BD.6010708@attbi.com>
Source record: 35168
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

It's a shame we couldn't obtain a few "surplus" HARM missles to send the
Chicken Banders way.
Bill Higdon
Allodoxaphobia wrote:
> On Tue, 27 May 2003 10:59:45 +0100, Richard hath writ:
>
>>I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
>>144/28 Mhz converter.
>>
>>It's been suggested that for a 28 Mhx tuneable IF I could quite
>>reasonably buy a CB radio and modify it.
>
>
> In addition to the other comments:
>
> Depending on your location, the hi-power, hi-splatter bleed-through
> from marble-mouthed CB `operators` with ampliofiers may make your
> life miserable.
>
> 73
> Jonesy

3768. HP 8901A ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 18:59:16 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vd7dcdgvut1hdc@corp.supernews.com>
Source record: 35169

I've got one of these modulation analyzers that has problems and I'm wondering what use besides the counter and power meter function it might have in ham radio. I thought it had a tracking generator but from what I can tell it doesn't so it can't be signal generator but I 'm guessing it has the capability of being a receiver of sorts. Any ideas or a help with a manual appreciated.
tnx
hank wd5jfr

3769. Re: HELP - HP8482A sensor repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 19:29:12 UTC
From: hammy <email@hotmail.com>
Message-ID: <Xns9388D08E4E8CFhammy@205.215.62.132>
Source record: 35170
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"gcd" <gcdnoSPAM@austarmetro.com.au> wrote in
news:3ed3150f@news.comindico.com.au:

> Hi Namaste,
> thanks for the link, I already have the manual - the issue with it is
> that it treats the A1 assembly as a replaceable unit and does not
> describe any repair / disassembly processes for it.
> Thanks
> Greg
>
>
>
>
> "artie" <silli_artie@hotmail.com> wrote in message
> news:260520030951271724%silli_artie@hotmail.com...
>>
>> The Operation and Service Manual for the 8242 is available on the
>> Agilent website -- go to http://www.agilent.com and put 8242A in the
>> search box.
>>
>> Namaste-
>>
>>
>>
>>
>>
>>
>> In article <3ed1f62f@news.comindico.com.au>, gcd
>> <gcdnoSPAM@austarmetro.com.au> wrote:
>>
>> > Hi all,
>> > I 'm trying to repair an 8482A. I've removed the sensor assy and am
> trying
>> > to slide the substrate out of the cylinder, however it is held in
>> > place
> by 4
>> > pins. These don't appear to be a hex key or other tamper proof
>> > tool,
> they
>> > appear to be press fit.
>> >
>> > Any one provide some hints on getting these out so I can remove the
>> > substrate?

>> >
>> > Thanks in advance
>
>
>

The 84XX series of sensors were never designed to be repaired. If they fail, Agilent just charge for replacement. Even if you do get the substrate out, I doubt if you will be able to get the replacement diode for it.

I am sorry to put a downer on you, but I suspect you are wasying your time.

-x- 100 Proof News - http://www.100ProofNews.com
-x- 3,500+ Binary NewsGroups, and over 90,000 other groups
-x- Access to over 700 Gigs/Day - $8.95/Month
-x- UNLIMITED DOWNLOAD

3770. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 20:13:36 UTC
From: Glowplug53 <alanjc@nwlink.com>
Message-ID: <3ED3C6F0.8432791@nwlink.com>
Source record: 35173
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Howdy,

Electronic Dimensions in Tacoma :)

GP53

John Miles wrote:
>
> In article <3200347.0305270937.78a41c29@posting.google.com>,
> k7itm@aol.com says...
> > Gee, John, I didn't realize you were a "neighbor."
>
> Cool, want some junk? :)
>
> > And I was really
> > hoping that you would have gotten a better response to this. I have
> > some equipment that I really should get rid of too, and would like to
> > find some decent homes for it. Some boatanchor type components,
> > too...things like iron-core power transformers that I'd hate to just
> > toss. No big plate transformers (other than one that's too high a
> > voltage for most tubes), but quite a few lower-voltage things in the
> > few VA up to perhaps around 300VA. But if you can't even get rid of
> > nice test equipment, maybe it is time to start dumping. :-(
>
> Well, in all fairness, maybe I shouldn't have expected instant
> gratification from an ad posted six hours in advance of the 'deadline.'
> Usenet isn't an instant-messaging medium, after all. Plenty of people
> expressed interest, albeit from New York and New Zealand!
>
> I've been playing with the 8551/851 for the past several hours; it's
> amazing how well it works for something from the early-Apollo era. The
> filament-voltage regulation is pretty crappy thanks to some germanium
> transistors I never got around to replacing, but the electrolytics seem
> to be holding up well and the exotic parts (BWO, IF cavity amplifier,
> front-end mixer, CRT) are all still within or better than spec. It's
> still got a couple of decades' worth of life in it, I think. Certainly
> a much-better spectrum analyzer than the ones people are building with
> CATV tuners and the like.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam

> ----------

3771. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 20:56:03 UTC
From: Nick <nick.atrill@blueyonder.co.uk>
Message-ID: <IhQAa.78$Y7.57@news-binary.blueyonder.co.uk>
Source record: 35172
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

As a cheap option "and I did say cheap" change the Local Osc crystal in the converter
cost special cut about £10 / off shelf £2-3 at best
you biggest problem will be co channel rejection

Nick G6GFO

"Bill Higdon" <w.higdon@attbi.com> wrote in message news:3ED3B4BD.6010708@attbi.com...
> It's a shame we couldn't obtain a few "surplus" HARM missles to send the
> Chicken Banders way.
> Bill Higdon
> Allodoxaphobia wrote:
> > On Tue, 27 May 2003 10:59:45 +0100, Richard hath writ:
> >
> >>I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
> >>144/28 Mhz converter.
> >>
> >>It's been suggested that for a 28 Mhx tuneable IF I could quite
> >>reasonably buy a CB radio and modify it.
> >
> >
> > In addition to the other comments:
> >
> > Depending on your location, the hi-power, hi-splatter bleed-through
> > from marble-mouthed CB `operators` with ampliofiers may make your
> > life miserable.
> >
> > 73
> > Jonesy
>
>

3772. Re: Solar panels / charge controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 20:57:06 UTC
From: mcalhoun@ksu.edu
Message-ID: <bb0jf2$m4o@unix2.cc.ksu.edu>
Source record: 35174

>> I kinda like the idea of using an automotive regulator (which are
>> series regulators, I think). That way, if it ever quits, I can
>....[snip]....

Roy Lewallen <w7el@eznec.com> writes:
>A typical auto regulator adjusts the alternator field current to control
>the battery voltage. Depending on the regulator design, it might work
>....[snip]....

Many years ago I had a 12-V, 200 watt WindCharger with no built-in way
to control the charging current, so I built a shunt regulator to "dump"
excess current into two 100-watt one-ohm resistors. The total design
(hack?) ran my ham shack for 15 years (until trees grew taller than the
generator's support pole!) Maybe this ASCII schematic will get thru OK:

```
+ -----+-------+----------------------+-------------+----------+
FROM | | | | |
W R 5Kohm | R 0.13ohm 10W R each |
I | pot | | | |
N | R 200 +-----+--------)-------+ | |
D | | ohm | | | | | +|
C | | | R4.7Kohm | 5watt R each | ~12-volt
H | | | | | | | auto
A +---+ | b |c | b |c | b |c battery
R | | +------GE69A +------2N2082 +---2N2082 -|
G | | | |e |e |e |
E 820 R +---TL431 | 1ohm R 1ohm R |
R ohm | | | 100W | 100W | |
- -----+-------+--------+-------------+-------------+----------+
```

The left-most three resistors are 1/2 watt;
the TL431 is an "adjustable zener".

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3773. Re: HP 8901A ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 21:29:48 UTC
From: Bob P <kb8tlHATESSPAM@yahoo.COM>
Message-ID: <gNQAa.4206$4G.1931028@newssvr28.news.prodigy.com>
Source record: 35175

Assuming it is similar to the 8902, it is pretty useful for FM deviation checking. You can use it as a receiver of sorts but IIRC, it has no AGC.
Bob
kb8tl

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message news:vd7dcdgvut1hdc@corp.supernews.com...
> I've got one of these modulation analyzers that has problems and I'm
> wondering what use besides the counter and power meter function it might
> have in ham radio. I thought it had a tracking generator but from what I
> can tell it doesn't so it can't be signal generator but I 'm guessing it has
> the capability of being a receiver of sorts. Any ideas or a help with a
> manual appreciated.
> tnx
> hank wd5jfr
>
>

3774. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 21:48:00 UTC
From: William Sommerwerck <williams@nwlink.com>
Message-ID: <vd7n9alom7bu2c@corp.supernews.com>
Source record: 35176
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

I was interested, too -- especially since I about a half-hour away -- but I already have a lot of SX-70s, quite a few Colorpacks, and some rather unique models, like the 185.

Oh, wait... You said Polarad. Sorry...

3775. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 23:27:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305271527.caf6795@posting.google.com>
Source record: 35177

As with many such inventions, the history seems a bit clouded. I did
a search for the inventor of the magnetron, and all roads lead back to
about 1920, but to various people, including an American, Albert Hull,
a German, Habann, and also to Augustin or August Zacek. I think it's
more important that all of these gentlemen (and many others working in
related areas) made contributions to the early development of the
magnetron, than to worry about if there was really just one inventor.

Cheers,
Tom

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0305270947.6361f81f@posting.google.com>...
> remove_ok1sip@atlas.cz (OK1SIP) wrote in message
news:<5f5159fa.0305262220.522df93b@posting.google.com>...
> > Hi, you wrote:
> > > Radar was ideal and I rather suspect that beginning
> > > radar design was the impetus for the invention of the magnetron.
> >
> > Not so. The magnetron (in its original form) was invented by Augustin
> > ?ï¿½ček, professor of the Charles University in Prague, some eighty
> > years ago. Radiolocation was developed later, mainly during WWII.
> >
> > BR from Ivan
>
> However, as far as I know, the trick to making _high_power_output_
> magnetrons came from the Brits at the beginning of WWII. See Robert
> Buderi, "The Invention That Changed the World," ISBN 0-684-81021-2.
> The high pulsed power output is clearly critical to practical radar
> systems in those days. Certainly there was a lot of interest about
> that time in finding ways to generate high power UHF pulses, and
> finding ways to detect small signals at those frequencies.
>
> Cheers,
> Tom

3776. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-27 23:38:32 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3ED3F6F8.1010203@bellsouth.net>
Source record: 35178

VE3CWJ wrote:
> Programming 2708 is a little tricky now-a-days with newer programmers. These
> old chips needed other voltages to program with, something like +21 or +25
> volts if I remember correctly, plus a negative voltage. If you can find a
> 2758 instead, it is pin equivalent to 2708 but is programable with more of
The 2758 is really nothing more than a 2716 that is half bad. You
program half
of a 2716 (upper or lower depending on what the A10 pin is tied to, high
or low).

3777. Re: HELP - HP8482A sensor repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 00:54:53 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <270520031754518766%silli_artie@hotmail.com>
Source record: 35179
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <3ed3150f@news.comindico.com.au>, gcd
<gcdnoSPAM@austarmetro.com.au> wrote:

> Hi Namaste,
> thanks for the link, I already have the manual - the issue with it is that
> it treats the A1 assembly as a replaceable unit and does not describe any
> repair / disassembly processes for it.
> Thanks
> Greg

You've got a problem -- the A1 unit (thermocouples plus diode) are not
what's considered a user-serviceable item. The service manual gives a
hint at this when it talkes about tweaking performance by varying the
position of the wires from A1 to the interface board.

If you've popped a thermocouple, which is all too damn easy, save the
spare parts and start hunting for another unit. Th.ey turn up on eBay
all the time.

Good luck!

3778. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 01:39:57 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3ed412b1.687670658@news.bellatlantic.net>
Source record: 35180
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Tue, 27 May 2003 10:59:45 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
>144/28 Mhz converter.

Reasonable way to go.

>It's been suggested that for a 28 Mhx tuneable IF I could quite
>reasonably buy a CB radio and modify it.
>
>Cobra 148 has been mooted as a possibility.

ok choice but, only for am. To add SSB/CW would take a lot of
work that could be more easily done from the ground up.

Many CB radios are not good candidates, the better choices
would be any of the am/ssb radios with UNIDEN made boards.

This is a better choice if your using a CB as foundation would be a
AM/SSB radio as it's already capable of AM, SSB and CW.
Then you only need to modify the PLL or outr right replace it
with a VFO (or crystal osc mixed with a VFO).

I've done this with older (those that did 23ch) AM/SSB radios
and they are easier to work with. My current 6m SSB radio is
an old (Ca1972) Midland 13-849!

If building is new to you I'd strongly suggest considering a kit.
An Elecraft K2 makes a very good IF radio and it covers 10m.

Allison
KB1GMX

3779. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 02:00:25 UTC
From: william_b_noble <nobody@nowehre.com>
Message-ID: <bb156l$1k82$1@nntp1.interworld.net>
Source record: 35181
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

if you have large HV transformers to dispose of, search out the tesla coil groups - there is a tesla list that is quite active (it's a closed list, but not that hard to find) - a 10 to 30 KV transformer at a few hundred MA would make a coiler quite happy.

>
> > And I was really
> > hoping that you would have gotten a better response to this. I have
> > some equipment that I really should get rid of too, and would like to
> > find some decent homes for it. Some boatanchor type components,
> > too...things like iron-core power transformers that I'd hate to just
> > toss. No big plate transformers (other than one that's too high a
> > voltage for most tubes), but quite a few lower-voltage things in the
> > few VA up to perhaps around 300VA. But if you can't even get rid of
> > nice test equipment, maybe it is time to start dumping. :-(

3780. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 02:34:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <bb177g$oj9$1@sparta.btinternet.com>
Source record: 35182

> >However, as far as I know, the trick to making _high_power_output_
> >magnetrons came from the Brits at the beginning of WWII. See Robert
> >Buderi, "The Invention That Changed the World,"

==========
True. The final touches to the first 3,000 megacycles cavity magnetron, 50 KW peak power output, 1 micro-second pulse-width, pulse repetition frequency 400 c/s per second, were made by the inventors Randall and Boot in a top-secret laboratory at Birmingham University during the air-raids on that city and on nearby Coventry. The modulators and other novel devices also had to be developed. R & B had begun with the 2-anode low-power cw magnetron which had been available perhaps for 15 years but nobody had ever made any use of it.

At the time I lived a few miles from the university and worked at a factory making drive-motors and selsyns without knowledge of their ultimate destinations until later I joined the RAF on radar mantenance and recognised and flew with some of my previous products. The receiver's detector was a tiny cat's whisker pressing against some metal whose name I've forgotten.

Churchill himself ordered the magnetron not to be used in raids over Europe until 1000-bombers a night could be deployed. This was to prevent the secret falling into German hands who, at the time, had a preponderance of aircraft. He gave the first of the magnetrons to Roosevelt and the Americans, who with their far greater industrial capacity proceeded with mass-production. Later on the Americans developed a 10,000 megacycle version which allowed narrower beam-widths with smaller dishes and greater navigating precision. R & B's first working model of the cavity magnetron is in the London Science Museum, Kensington. The last time I saw it it was all by itself in a locked glass case. The first time I held one in my hands was in 1944.

(Incidentally, one cloudy night when 1000 bombers were over western Europe navigating by Gee (Loran), the Germans, who had figured out how it worked, suddenly switched on many jammers and 110 aircraft failed to return to base. Most were shot down or crash-landed. Many landed in Scandinavia, Russia and north Africa. Loss of aircrew alone was a great disaster.
==========
>
> You're right, Tom. Codenamed 'HS2' the earliest airbourne radar
> systems were pioneered by the Royal Air Force's Pathfinder squadron.

==========
Actually the codename was H2S or hydrogen-sulphide which has an abominable stink. Until the Pathfinders with H2S (there was also shorter-ranging Oboe) most bombs dropped at night by the RAF had killed cows in the fields miles from the intended targets. Whereas night bombing of British cities was

fairly accurate as I have myself witnessed. Industrial areas were chosen rather than residential. I understand German bombers were guided by following cw radio beams. Coventry city centre once alight provided its own beacon and on the same night a greater wieght of bombs fell on Birmingham.

The RAF had airborne radars at the begining of the war. The codename was ASV (Air-Sea-Vector) Mk1 and Mk2, which operated on 176 MHz with a multi-element yagi on each side of the nose of the aircraft. These radars were installed on long-distance flying boats such as American Catalinas and 4-engined Sunderlands and were engaged in convoy escort duties in the Atlantic and in the Indian Ocean.

The H2S scanner (dish) was usually installed under the nose of a bomber enclosed in a perspex radome. However this was not possible with flying boats and two scanners were employed, one under each wing tip. The hull or belly of a Sunderland was an obstruction and it was necessary to synchronise the rotation of the two scanners, one covering the portside 180-degrees and the other the starboard side. The scanners rotated at about one cycle every two seconds which also had to be exactly sychronised with the operator's PPI (Plan-Position-Indicator, a crt). There was also a means of measuring height above sea or ground level. The first echo to be received following each pulse obviously comes from the ground.

The scanners were fed via waveguides running inside each wing. In dead centre of the aircraft was a waveguide change-over switch which had to be mounted on the floor of the gangway on the top deck not very far behind the captain and co-captain (remember it's a boat). The switch also had to be operated in sychronism with the scanners and PPI at very high speed once every second whenever the radar beam passed through dead-ahead and dead-astern. It is impossible to describe the switch design on these walls. Sufficiant to say it emitted a loud clang once every second which could be heard above the roar of four great engines. There were other modifications needed and the codename was changed from H2S to ASV Mk3 and later to Mk5. I do not recollect what happened to MK4.

The crew did not like the one-second clangs for hours on end and in the dim light were always tripping over the f*****g thing.

Towards the end of the war ASV included a valve-computer which, in day or night or in fog, when switched into operation by the captain calculated and remembered the distance and direction of a submarine conning tower or snorkel, took control of George the automatic pilot and automatically released the depth charges in the right place even if the U-boat had submerged. When a U-boat detected a 400 cycle pulse-repetion frequency instead of submerging the captain often chose to stay on the surface, uncover the cannon and fight it out forcing the skipper to release George and take evasive action. I understand in the last few months of the war very few U-boats ever returned to base. Crews knew they were on suicide missions while their families were being burned alive in fire-storms. These days we have human suicide bombs which don't need hi-tech gear to find targets.

I can offer no references for the foregoing. Just my memory banks.

Grandad Reg

3781. Re: Cavity magnetron for 500MHz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 03:38:19 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <ru98dvs36mdbrmpbqor8n08mjut71lv69b@4ax.com>
Source record: 35171

On 27 May 2003 10:47:28 -0700, k7itm@aol.com (Tom Bruhns) wrote:

>However, as far as I know, the trick to making _high_power_output_
>magnetrons came from the Brits at the beginning of WWII. See Robert
>Buderi, "The Invention That Changed the World,"

You're right, Tom. Codenamed 'HS2' the earliest airbourne radar
systems were pioneered by the Royal Air Force's Pathfinder squadron.
It was a hugely significant development at a very crucial time.

3782. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 03:56:51 UTC
From: YD <yd.tech@techie.com>
Message-ID: <0g07dv4ehrkf8hr2rn9feisfftos8q242v@4ax.com>
Source record: 35183
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

On Mon, 26 May 2003 16:02:18 GMT, "news2020" <user1025@att.net> wrote:

>
>This is a man who has posted abuses against me as well as conspiracy to
>commit murder, etc.

So have everyone else.

>
>He is posting from London/UK which he thinks is a safe haven for
>hate-mongers / terrorists like himself.

Where I am I'm even safer.

>
>He is probably funded by Church sources (religious faith funding type) or
>secret organizations run by Church sources or such kooks. He has posted lies
>and attacks pretty routinely.

It's all out of my own pocket.

>
>It is time to bring such people to book for the crimes that they are
>committing without batting an eyelid.

Come and get me before my extra-long-distance death-ray gets you.

- YD.

3783. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 04:57:52 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3ED4420F.C2AB6E53@earthlink.net>
Source record: 35184
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Tom Bruhns wrote:
>
> Gee, John, I didn't realize you were a "neighbor." And I was really
> hoping that you would have gotten a better response to this. I have
> some equipment that I really should get rid of too, and would like to
> find some decent homes for it. Some boatanchor type components,
> too...things like iron-core power transformers that I'd hate to just
> toss. No big plate transformers (other than one that's too high a
> voltage for most tubes), but quite a few lower-voltage things in the
> few VA up to perhaps around 300VA. But if you can't even get rid of
> nice test equipment, maybe it is time to start dumping. :-(
>
> Cheers,
> Tom

Don't forget the antique radio collectors on
news:rec.antiques.radio+phono or the guys who collect and restore old
ham radio equipment on news:rec.radio.amateur.boatanchor
--

Michael A. Terrell
Central Florida

3784. Re: ION GENERATOR!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 05:18:14 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <eqg8dvk7a5895aa3nrlmsrjfs3gcueb30s@4ax.com>
Source record: 35185

On Tue, 27 May 2003 18:43:49 GMT, "Chuck_McDevitt"
<Chuck_McDevitt@a-t-t-b-i.com> wrote:

>"jos" <soj@sympatico.ca> wrote in message
>news:3ED0D7F3.BAB0B387@sympatico.ca...
>> I just purchased an air purifier for my shack with the option of
>> "NEGATIVE ION" generation. The air cleaner uses a high voltage cell to
>> attrac dust. Does anybody know a method to verify if the unit generates
>> ions without opening the unit. The manual mention that the ions are
>> generated from a needle point system and after a while the needle needs
>> to be changed. Thanks! Jos VE2AUC
>
>Can't you tell by smell? I can definitely smell the difference when the ion
>generator is working.
>

If you can smell it, then it is probably generating ozone, which is
not at all healthy. O3 is a strong oxidizing agent, which is harmful
to the lungs and potentially damaging to your equipment. The FDA has
set acceptable exposure levels for ozone, and alerts are posted
warning people to stay inside when that level is exceeded. When you
can smell it, that level has been exceeded several times over. If the
unit is adjustable, you might be able to tone it down so it doesn't
generate the ozone, only the desired ions.

A google search for "ozone generator" in the alt.support.asthma
newsgroup will provide you with many details about the dangers of
ozone and which purifiers are known to generate dangerous levels.

Ionic cleaners work by emitting free electrons, which attach
themselves to dust, pollen, bacteria and other particles floating in
the air. The negatively charged particles are then attracted to any
positive or neutral surfaces. But you need to find out where the
ionized particles are landing and clean that often. Usually it is a
grounded object, like a radiator or equipment case, but it might also
be a CRT or o-scope screen, which have a strong positive charge.

It is more likely that the needle just needs to be cleaned, but they
are gouging you the price of replacement parts.

Bob McConnell
N2SPP

3785. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 08:18:19 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <6qr8dv8tjqfnr7hu1l24iu77vrii59uvu1@4ax.com>
Source record: 35186
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

On Mon, 26 May 2003 16:02:18 GMT, "news2020" <user1025@att.net> wrote:

>
>This is a man who has posted abuses against me as well as conspiracy to
>commit murder, etc.
>
>He is posting from London/UK which he thinks is a safe haven for
>hate-mongers / terrorists like himself.

The other 79,999,999 folk living in the UK probably think the same.

>He is probably funded by Church sources (religious faith funding type) or
>secret organizations run by Church sources or such kooks. He has posted lies
>and attacks pretty routinely.

Yup, Church of England.

>
>It is time to bring such people to book for the crimes that they are
>committing without batting an eyelid.

Yessir dammright, go tell your local Sheriff to book em. He'll be glad
to round up a hoss, a posse,and enuf beans to overland to mother
England. "Blazing Saddles" was a thoughtful documentary on a similar
case.

3786. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 09:30:12 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vd8ssvdg77dj1b@corp.supernews.com>
Source record: 35187
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Quit crossposting and remove the other groups.

Mother

"Barry Lennox" <pbarryplennoxp@operamail.com> wrote in message
news:6qr8dv8tjqfnr7hu1l24iu77vrii59uvu1@4ax.com...
> On Mon, 26 May 2003 16:02:18 GMT, "news2020" <user1025@att.net> wrote:
>
> >
> >This is a man who has posted abuses against me as well as conspiracy to
> >commit murder, etc.
> >
> >He is posting from London/UK which he thinks is a safe haven for
> >hate-mongers / terrorists like himself.
>
> The other 79,999,999 folk living in the UK probably think the same.
>
> >He is probably funded by Church sources (religious faith funding type) or
> >secret organizations run by Church sources or such kooks. He has posted
lies
> >and attacks pretty routinely.
>
> Yup, Church of England.
>
> >
> >It is time to bring such people to book for the crimes that they are
> >committing without batting an eyelid.
>
> Yessir dammright, go tell your local Sheriff to book em. He'll be glad
> to round up a hoss, a posse,and enuf beans to overland to mother
> England. "Blazing Saddles" was a thoughtful documentary on a similar
> case.
>
>

3787. Re: Crystal radio variation

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 13:05:38 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Cu2Ba.114588$_e6.97646@news2.east.cox.net>
Source record: 35188

The best headphones are made from WWII vintage sound powered
phone sets. They do require a very high quality impedance matching
transformer since the sound powered elements are very low impedance.

The trick is low loss impedance matching, and choosing the most
sensitive transducer available.

Peter

"Alex" <ve3leg@hotmail.com> wrote in message
news:3ED254CA.9020009@hotmail.com...
> I built a simple crystal radio over the weekend, and used an interesting
> alternative to the oldstyle high impedance headphones. I used a 500 ohm
> impedance CB microphone and an 8ohm/1000ohm RS transformer, and I got
> output. Faint, but there. In a quiet room if I listened carefully I
> could hear a basketball game on the local AM sports station. Any ideas
> for improving this, or sources for real high impedance speakers?
>

3788. FS: Open frame POWER SUPPLIES for tube, solid state, more

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 16:44:43 UTC
From: ovrreactor@aol.com
Message-ID: <20030528124443.20386.00000501@mb-m01.aol.com>
Source record: 35189

I designed and built an assortment of open frame linear power supply boards for electronic projects.

ALL are completely assembled and tested.
Jumper selectable for 120/240V input
Board dimensions 3.8" x 2.5"
Height is 1.25" or less (fits in 1U rackmount chassis)

6.3 Volt / 650 mA / $29 (tube filament supply)
12.6 Volt / 380 mA / $29 (tube filament supply)
15 Volt / 320 mA / $29 (general purpose supply)
18 Volt / 290 mA / $29 (API pre)
24 Volt / 210 mA / $29 (Neve and 990 pre)
48 Volt / 60 mA / $35 (phantom supply)
90 Volt / 36 mA / $35 (Trans-Oceanic radio, etc.)
120 Volt / 28 mA / $35 (Tube B+, great for subminiatures)

Check my website for pictures and complete specifications. Asking prices do not include CA sales tax and shipping. Credit cards OK when paying through PayPal!

INTERESED? Please respond BY EMAIL to <OvrReactor@aol.com>, do not post.

Best regards,
Tom Mitchell
website - http://members.aol.com/ecc81

3789. FS: Open frame POWER SUPPLIES for tube, solid state, more

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 16:45:55 UTC
From: ovrreactor@aol.com
Message-ID: <20030528124555.20386.00000503@mb-m01.aol.com>
Source record: 35190

I designed and built an assortment of open frame linear power supply boards for electronic projects.

ALL are completely assembled and tested.
Jumper selectable for 120/240V input
Board dimensions 3.8" x 2.5"
Height is 1.25" or less (fits in 1U rackmount chassis)

6.3 Volt / 650 mA / $29 (tube filament supply)
12.6 Volt / 380 mA / $29 (tube filament supply)
15 Volt / 320 mA / $29 (general purpose supply)
18 Volt / 290 mA / $29 (API pre)
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120 Volt / 28 mA / $35 (Tube B+, great for subminiatures)

Check my website for pictures and complete specifications. Asking prices do not include CA sales tax and shipping. Credit cards OK when paying through PayPal!

INTERESED? Please respond BY EMAIL to <OvrReactor@aol.com>, do not post.

Best regards,
Tom Mitchell
website - http://members.aol.com/ecc81

3790. Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 18:36:14 UTC
From: news2020 <user1025@att.net>
Message-ID: <yk7Ba.101695$cO3.7200067@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35191
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

> Yessir dammright, go tell your local Sheriff to book em. He'll be glad
> to round up a hoss, a posse,and enuf beans to overland to mother
> England. "Blazing Saddles" was a thoughtful documentary on a similar
> case.
>

I don't know about the degree of abuse in your own past postings, but as far as the Police Chief goes, he is missing in action for over one and a half years now, at least, since I first reported these kinds of incidents. You see, he happens to be British too. And no doubt, trying to be the best gentleman in appearances (would that be just like this guy in 1291 ? It is not a good idea to compare people like that.). There seems to be some kind of tracing of ancestry back to the roots of Neander Valley and camaraderie that might be going on here too in parallel with all these torture and injury and killing activities.

He goes and talks with this African American city youth leader who then talks to somebody in the fire department and then to somebody else, etc. And so it goes. Hemming and hawing and watching the fun while I am being injured and tortured and electrocuted and burnt 24 hours a day, especially finessed during the time when I am sleeping. That way there will not be even witnessed proof of the event happening ! What a brainy set of people to have thought up such a macabre ghoulish scheme and put it in operation with infinite resources of ghouls, materials, equipment and vehicles and money and everything !

"Barry Lennox" <pbarryplennoxp@operamail.com> wrote in message
news:6qr8dv8tjqfnr7hu1l24iu77vrii59uvu1@4ax.com...
> On Mon, 26 May 2003 16:02:18 GMT, "news2020" <user1025@att.net> wrote:
>
> >
> >This is a man who has posted abuses against me as well as conspiracy to
> >commit murder, etc.
> >
> >He is posting from London/UK which he thinks is a safe haven for
> >hate-mongers / terrorists like himself.
>
> The other 79,999,999 folk living in the UK probably think the same.
>
> >He is probably funded by Church sources (religious faith funding type) or
> >secret organizations run by Church sources or such kooks. He has posted lies
> >and attacks pretty routinely.
>
> Yup, Church of England.
>
> >
> >It is time to bring such people to book for the crimes that they are
> >committing without batting an eyelid.

>
> Yessir dammright, go tell your local Sheriff to book em. He'll be glad
> to round up a hoss, a posse,and enuf beans to overland to mother
> England. "Blazing Saddles" was a thoughtful documentary on a similar
> case.
>
>

"news2020" <user1025@att.net> wrote in message
news:eUqAa.99075$cO3.6942664@bgtnsc04-news.ops.worldnet.att.net...
>
> This is a man who has posted abuses against me as well as conspiracy to
> commit murder, etc.
>
> He is posting from London/UK which he thinks is a safe haven for
> hate-mongers / terrorists like himself.
>
> He is probably funded by Church sources (religious faith funding type) or
> secret organizations run by Church sources or such kooks. He has posted lies
> and attacks pretty routinely.
>
> It is time to bring such people to book for the crimes that they are
> committing without batting an eyelid.
>
> "Paul Burridge" <redscar@waitrose.notformail.com> wrote in message
> news:jgt4dvcg0vlub1s41uort1g3o2913s6sdu@4ax.com...
> > On 25 May 2003 16:56:29 -0700, Winfield Hill <whill@picovolt.com>
> > wrote:
> >
> > > Maybe not, but it's a pretty fascinating view of the universe,
> > > where many of the simple humdrum items of our routine lives take
> > > on a mystical, almost magical quality.
> >
> > Pyschiatrists actually refer to it as "magical thinking" and it's one
> > of the chief symptoms of this disorder.
>
>

3791. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 19:11:26 UTC
From: paf@mail.telepac.pt
Message-ID: <4ff353f6.0305281111.7cb06a74@posting.google.com>
Source record: 35192
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<bavcqb$4433s$1@ID-150848.news.dfncis.de>...
> Hi.
>
> I'm wanting to make a 2 meter SSB/CW (and possibly AM) RX. I have a MM
> 144/28 Mhz converter.
>
> It's been suggested that for a 28 Mhx tuneable IF I could quite
> reasonably buy a CB radio and modify it.
>
> Cobra 148 has been mooted as a possibility.
>
> Any know of any other CB radios that make good modification projects?
>
> I'm in UK by the way (If that makes a difference).
>
> TIA.
>
> Rich.

It makes a lot of a difference.
Prices are higher this side of the Atlantic!!!!!! :-(:-(

There is a 10 Meter radio called the Albrecht AE485S, it is a clone of the
Radio Shack HTX-10 and can be bought from Germany for around 150 Euro used.

Is is not a VFO radio and it is not a chanelized radio.....
It has a very strange tuning. ;-) ;-) You can change each digit of
the frequency individualy down to 1 kHz without changing the other digits.
And you can jump in 10 kHz steps, not necessarily in 10 kHz boundaries
You can do 28.123 28.133 28.143 ... etc....

The latest german version has 25W in FM/SSB, and has variable power output.
And they have manuals and schematics on the Web.
No "hacking the VFO needed".

It doesnt do CW, but there is a circuit to do so on:
http://www.qrparci.org/p28.PDF

I know that you already have a RX converter, and a TX but why not a
Ten-Tec 1210 transverter kit?
Can be had for around 170 Euros from
http://www.funkamateur.de/index.htm

Greetings
Paulo Ferreira CT2ILQ

3792. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 21:54:14 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <voaBa.14555$Mu3.302562@newsfep4-glfd.server.ntli.net>
Source record: 35193
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

<nospam@nouce.bellatlantic.net> wrote in message
news:3ed412b1.687670658@news.bellatlantic.net...
> On Tue, 27 May 2003 10:59:45 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> ok choice but, only for am. To add SSB/CW would take a lot of
> work that could be more easily done from the ground up.
>

That is incorrect. The Cobra 148 is a 120 Channel AM/FM/CW/SSB box with a "slider" that can easily be modified to cover the entire gap between the channels. This box may be more familiar in other countries as the SuperStar 360.

--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

3793. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 22:03:46 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <voaBa.14556$Mu3.302562@newsfep4-glfd.server.ntli.net>
Source record: 35194
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Richard,

I see you're getting loads of replies suggesting the use of one of these Lincoln/Albrecht/Uniden/Ranger type boxes.

Given the application and intended project goals, I would suggest the following be borne in mind though when deciding

1. Cost, a Lincoln=�150, CB multi-mode �70 - second hand for good examples.
2. Modern digi readout sets are microprocessor controlled making them more difficult to modify to the degree you want in the long term.
3. Modern sets use loads of surface mount bits - hope you've got good eyesight.
4. The layout is not the modular block layout you are likely to find in the older multimodes.

In addition to the Cobra, consider any of the other readily available old multimodes. My only reason for suggesting the Cobra was it has a reputation of being more selective than many of the others.

Feel free to email me direct regarding this. I may be able to assist with information on the various multimodes that were in common usage here.
--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

3794. Camping antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 22:11:10 UTC
From: Dave <unsolicitedmale@hotmail.com>
Message-ID: <3ed53404$1_7@news.meganetnews.com>
Source record: 35195

Hello,

I'm putting ham gear in my ancient 13' camping trailer
finally, and wonder which way to go on the antenna.

Rig is an old Atlas 210X HF ('old' bands). I'm mostly
going to run 40 meter CW at night.

What I've got is an old military jeep antenna (unloaded)
It's a vertical rod essentially, with a big ball that I've
mounted on a metal tripod stand. I plan to bring a
33 foot wire (maybe 2) to lay on the ground for radials
for 40m (and 15 too I would guess). It will be fed with
coax from my Kenwood AT-180 tuner. The antenna
breaks down in small pieces, which is what I like. What
I don't like is it's so short - 12 feet I believe - not even
a quarter wave.

Would I be better off just running as long a random wire
as high as I could and just try to load into that with the
AT-180 and the Atlas?

I'm just 'armchair speculating' - I'll of course try both ways
out, but just wanted to 'yak about it' first.

Advice?

Dave WB7AWK
Pacific Northwest

3795. Hello News2020 - we have indeed located you

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 22:36:23 UTC
From: Organization for Central Control <mindcontrolcentral@hotmail.com>
Message-ID: <3ed539de$1_6@news.meganetnews.com>
Source record: 35196
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

At last. We've found you. Yes, I am sorry, but you are correct. We have indeed been irradiating you for some time. I applaud your scientific approach in identifying us. Frankly, we thought you'd never figure it out. The ADT trick we tried fools most. Not you. There are other microwave sources in and around your home you have not found however, and we are still very much monitoring you and measuring the impact of this energy on you.

Please - don't mind all the rude and silly comments you're getting in this group. You're talking to US now, directly, no intermediary. Just ignore the group now and talk to us. Only us. The others in this group do not know what YOU and MYSELF are talking about, do they. It's just you and me - and we know far more about you than you might think.

We can see you. Yes, there are cameras as well. Look - up over your head, hidden - yes right there. You knew? Maybe... you're a smart man, and indeed a challenge to us. But we see where you go, and what you do. And yes, we have infiltrated all of the basic services in your neighborhood - you are absolutely correct on that account as well. Very smart, indeed. The specially modified two-way satellite dishes near you have micro-vision cameras as well, enabling us to see your every move in modulated UUHF microwave signals, received here at OCC headquarters in London.

Do not think this is a joking post. You know. Yes. It's all right there just as you suspected. Now it's just a matter of what we do with you now that you know. What do you suggest we do? Is Guy Fawke involved now as well? Death rays are nothing to mess with, my friend. Just how much DO you know? Whom have you told?

You should have stayed silent on this matter and let the work of our engineers do it's job. Now everyone knows, and there will now be a price to pay for your snooping into our affairs. Was it really worth it to shine light on our work like this?

Watch yourself, my friend. Be looking over your shoulder. We have people onto you, and we watch your every move. Your turn is coming, and I regret that you will not much care for the outcome.

You have been warned. It will only get worse for you now. I'm sorry.

We have assumed control.

OCC
London
This is a non functional email address for security reasons

3796. Hello News2020 - we have indeed located you

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 22:42:22 UTC
From: Organization for Central Control <mindcontrolcentral@hotmail.com>
Message-ID: <3ed53b46$1_7@news.meganetnews.com>
Source record: 35097
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Hello again - it's been a while, hasn't it.

At last. We've found you. Yes, I am sorry, but you are correct. We have indeed been irradiating you for some time. I applaud your scientific approach in identifying us. Frankly, we thought you'd never figure it out. The ADT trick we tried fools most. Not you. There are other microwave sources in and around your home you have not found however, and we are still very much monitoring you and measuring the impact of this energy on you.

Please - don't mind all the rude and silly comments you're getting in this group. You're talking to US now, directly, no intermediary. Just ignore the group now and talk to us. Only us. The others in this group do not know what YOU and MYSELF are talking about, do they. It's just you and me - and we know far more about you than you might think.

We can see you. Yes, there are cameras as well. Look - up over your head, hidden - yes right there. You knew? Maybe... you're a smart man, and indeed a challenge to us. But we see where you go, and what you do. And yes, we have infiltrated all of the basic services in your neighborhood - you are absolutely correct on that account as well. Very smart, indeed. The specially modified two-way satellite dishes near you have micro-vision cameras as well, enabling us to see your every move in modulated UUHF microwave signals, received here at OCC headquarters in London.

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Watch yourself, my friend. Be looking over your shoulder. We have people onto you, and we watch your every move. Your turn is coming, and I regret that you will not much care for the outcome.

You have been warned. It will only get worse for you now. I'm sorry.

We have assumed control.

OCC
London
This is a non functional email address for security reasons

3797. Re: Camping antenna advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 23:09:45 UTC
From: jgboyles@aol.com
Message-ID: <20030528190945.09394.00000645@mb-m07.aol.com>
Source record: 35098

>Would I be better off just running as long a random wire
>as high as I could and just try to load into that with the
>AT-180 and the Atlas?

Hi Dave, You might get more advice if you posted the question on the antenna group. I have done about all the configurations that you mention, and what I would go with is a long random wire as high as possible. Try to get a good ground system, which will require radials, or use you camper or vehicle metal frame as a ground. I have used a 33' fiberglass push-up pole with a vertical wire up the pole in conjunction with a tuner on my pick-up truck with excellent results on 40M. The frame of the truck is the ground return in this instance. Of course I was not driving down the road when I did this.
Anything will work to some degree when discussing antennas. In your situation, auto tuner, best ground possible, and as long and high as possible.

73 Gary N4AST

3798. Re: IR repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 23:15:09 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3ED5432D.421DFA80@bellatlantic.net>
Source record: 35099

Joel wrote:
>
> I have my house wired with coax and a modulator to allow all the TV's in the
> house to use the DirecTV satellite. We have two receivers (his and Hers) and
> two remotes. She watches the TV on channel 20 and my channel is 30. The
> modulator puts the two satellite receivers on those two channels and the
> locals on the normal channels. This all works great. To allow us to change
> channels in any room, we have a few RCA D935 IR repeaters sprinkled around
> the house. They pick up the IR signal and transmit it to the remote
> receivers and this also worked well for a few years. But now the IR
> repeaters are starting to get flakey. We are down to just a few working.
> With all that said, I was wondering if anyone had either a schematic for
> these units or other ideas of how to do the IR repeating. I 'think' the
> problem is the IR transmitters are drifting off frequency as I can make one
> work for a few months by bending the little loop of the oscillator. I can't
> seem to measure the frequency it transmits at, so I can't set it to any
> standard frequency. I was thinking of building my own rf transmitter to
> replace that portion of the ckts. But maybe you guys have a batter idea or
> even a ckt or two that would work.
>
> Joe Loucka AG4QC

Try cleaning the lenses.

3799. Have you really LOOKED at #1291?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 23:21:53 UTC
From: Organization for Central Control <OCC@hotmail.com>
Message-ID: <3ed54488$1_3@news.meganetnews.com>
Source record: 35100
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

One other thing. If you doubt us, perhaps you should take
a walk over to your neighbor's garage, at 1291 I believe.
Listen. Closely. Put your head against the door. You
might hear it. Perhaps this will help you understand.

You are correct - there are THOUSANDS in the US
and British governments paid to know. Paid to send
these signals.

But why do you think? Hmmm?? You've noticed the
effects haven't you? What do you suppose to be the
purpose?

Give it some thought - you may surprise even yourself.
And don't forget to check out 1291. He's one of us.

OCC

3800. Re: Have you really LOOKED at #1291?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-28 23:51:05 UTC
From: "David L. Stinson" <arc5@ix.netcom.com>
Message-ID: <3ED54B69.15E6298A@ix.netcom.com>
Source record: 35101
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Can one of you bit-heads get a bead on this whack-o?

Organization for Central Control wrote:
>
> One other thing. If you doubt us, perhaps you should take
> a walk over to your neighbor's garage, at 1291 I believe.
> Listen. Closely. Put your head against the door. You
> might hear it. Perhaps this will help you understand.
>
> You are correct - there are THOUSANDS in the US
> and British governments paid to know. Paid to send
> these signals.
>
> But why do you think? Hmmm?? You've noticed the
> effects haven't you? What do you suppose to be the
> purpose?
>
> Give it some thought - you may surprise even yourself.
> And don't forget to check out 1291. He's one of us.
>
> OCC

3801. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 00:27:22 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3ED5541A.D1FA1274@bellatlantic.net>
Source record: 35102

c.a.m@antispam.blueyonder.co.uk wrote:
>
> Hi.
>
> Does anyone know the formula for drawing out a single petal for parabolic dish
> at all ?
>
> Clive

y=ax^2 + bx + c is the general equation for a parabola.
It gives you a parabolic line.

You will rotate the line about the center for N/2 petals.
The distance you rotate will be the circumference of the
circle described by the end point of the parabola divided
by N. Put another way, when you design your parabola
for whatever wavelength and gain, you'll end up with
a design diameter. Pi times that is the circumferance.

Hope that helps.

3802. Need info on VN98AF power FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 01:40:49 UTC
From: Bob P <kb8tlHATESSPAM@yahoo.COM>
Message-ID: <BydBa.4567$4G.2145174@newssvr28.news.prodigy.com>
Source record: 35103

I picked up a bunch of VN98AF transistors on a broadband RF amplifier board.
They are TO-3 case style types and I'm optimisitic that they might work up
to 20 meters or so. Does anyone have any data sheets on these guys? I
believe the IRF-122 is a replacement. ?
thanks
Bob
(my return address is de-spamed)
actual is kb8tl at yahoo dot com

Funny how you can instantly find info on just about any vacuum tube ever
produced in the last 80 years but 10 year old transistors, forget it!

3803. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 01:57:47 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <KcCcnc5zLL649EijXTWcqw@comcast.com>
Source record: 35104
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Scott" <acepilot@bloomer.net> wrote in message
news:3ED344E1.4B1AA089@bloomer.net...
> The only problem I see with the idea is that CB radios are
channelized
> with a channel spacing of generally 10 KHz, so I wouldn't really
> consider it a "tunable IF". You will only be able to receive 40
> discreet frequencies +/- some control if the rig has RIT. Now, on
the
> other hand, if you intend to add a VFO to the CB rig, it should be
OK.

Depending on the design if the varactor diode is accessable on the PCB you can clip the bias wires, or cut the foil traces, going to the PLL circuit. All that is left is to install a cheap 3 terminal voltage regulator, like 10 VDC, and a ten turn pot with a dial. Wire up the pot so you have a variable DC voltage, from the regulator, connected to the varactor diode. Changing the pot setting will smoothly change the frequency, and the regulator should keep the varactor diode operating voltage constant for a stable operating frequency. He could then use either a chart of bias voltages vs frequency, or an external frequency counter to check his operating frequency.

The other option is to leave the CB rig as is and just change the crystal frequency in the transverter. The new crystal frequency would be calculated to put the transverter's IF frequency on the CB band. For weak signal work I would assume the 400 KHz of bandwidth of a 40 channel CB rig would easily cover the weak signal section of the 2m band. All he needs is to figure out the spec.'s for the new transverter crystal used to develop the mixer input frequency.

--
Leland C. Scott
KC8LDO

ARRL Member
NCI Member

Charter member of the
Lawrence Technological University
Wireless Society W8LTU

3804. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 02:46:30 UTC
From: kc5uea@satx.rr.com
Message-ID: <aweBa.49612$ui.3131658@twister.austin.rr.com>
Source record: 35105
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Actually the Cobra 148GTL only has AM/SSB.
The DX Models have CW/FM capability.
The 148 is a very good radio,probably the best that uniden made.
I have one with an unlocked "Voice Lock",Channel kit and Frequency Counter
that i will be putting on 10M.
I Also have a Cobra 2000 GTL which is the Base version of this radio.(it is
still stock)
"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:voaBa.14555$Mu3.302562@newsfep4-glfd.server.ntli.net...
>
> <nospam@nouce.bellatlantic.net> wrote in message
> news:3ed412b1.687670658@news.bellatlantic.net...
> > On Tue, 27 May 2003 10:59:45 +0100, "Richard"
> > <nearlynews_email@ntlworld.com> wrote:
> >
> > ok choice but, only for am. To add SSB/CW would take a lot of
> > work that could be more easily done from the ground up.
> >
>
> That is incorrect. The Cobra 148 is a 120 Channel AM/FM/CW/SSB box with a
> "slider" that can easily be modified to cover the entire gap between the
> channels. This box may be more familiar in other countries as the
SuperStar
> 360.
>
> --
> Alec Wood M1BNK
> Teesside UK
>
> Interested in Ham Radio....have a look at www.ukradioamateur.org
>
>

3805. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 02:54:47 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <bb3t1o$97a$1@bob.news.rcn.net>
Source record: 35106
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

news2020 wrote:
> > Yessir dammright, go tell your local Sheriff to book em. He'll be glad
> > to round up a hoss, a posse,and enuf beans to overland to mother
> > England. "Blazing Saddles" was a thoughtful documentary on a similar
> > case.
> >
> I don't know about the degree of abuse in your own past postings, but as
> far as the Police Chief goes, he is missing in action for over one and a
> half years now, at least, since I first reported these kinds of
> incidents. You see, he happens to be British too. And no doubt, trying
> to be the best gentleman in appearances (would that be just like this
> guy in 1291 ? It is not a good idea to compare people like that.). There
> seems to be some kind of tracing of ancestry back to the roots of
> Neander Valley and camaraderie that might be going on here too in
> parallel with all these torture and injury and killing activities.

It's not because he is British, or of British ancestory. It is because
he thinks you are a kook, and wishes very much he could help you out by
having you committed to a local insane asylum, but he cannot. You
cannot get someone committed these days unless he has demonstrated
beyond a reasonable doubt that he is a hazard to himself, or people
around him. Apparently you haven't gone that far...yet.
>
> He goes and talks with this African American city youth leader who then
> talks to somebody in the fire department and then to somebody else, etc.
> And so it goes. Hemming and hawing and watching the fun while I am being
> injured and tortured and electrocuted and burnt 24 hours a day,
> especially finessed during the time when I am sleeping. That way there
> will not be even witnessed proof of the event happening ! What a brainy
> set of people to have thought up such a macabre ghoulish scheme and put
> it in operation with infinite resources of ghouls, materials, equipment
> and vehicles and money and everything !

As I said, until you do something really dangerous to yourself, your
dementia is your own problem. Even your own family cannot get help
for you unless you allow it. It is your personal responsibility to
go out and get help with your mental health problems.

-Chuck

3806. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 03:07:29 UTC
From: news2020 <user1025@att.net>
Message-ID: <RPeBa.178113$ja4.9123083@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35107
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Get lost creep. You must have a vested interest (policeman or something like that).

Jellyfish that cannot say one word against the creeps that are injuring me even though I have reported to police more than one and a half years ago !!!

Eating government money and spewing garbage and hate.

"Chuck Harris" <cfharris@erols.com> wrote in message news:bb3t1o$97a$1@bob.news.rcn.net...
> news2020 wrote:
> > > Yessir dammright, go tell your local Sheriff to book em. He'll be glad
> > > to round up a hoss, a posse,and enuf beans to overland to mother
> > > England. "Blazing Saddles" was a thoughtful documentary on a similar
> > > case.
> > >
> > I don't know about the degree of abuse in your own past postings, but as
> > far as the Police Chief goes, he is missing in action for over one and a
> > half years now, at least, since I first reported these kinds of
> > incidents. You see, he happens to be British too. And no doubt, trying
> > to be the best gentleman in appearances (would that be just like this
> > guy in 1291 ? It is not a good idea to compare people like that.). There
> > seems to be some kind of tracing of ancestry back to the roots of
> > Neander Valley and camaraderie that might be going on here too in
> > parallel with all these torture and injury and killing activities.
>
> It's not because he is British, or of British ancestory. It is because
> he thinks you are a kook, and wishes very much he could help you out by
> having you committed to a local insane asylum, but he cannot. You
> cannot get someone committed these days unless he has demonstrated
> beyond a reasonable doubt that he is a hazard to himself, or people
> around him. Apparently you haven't gone that far...yet.
> >
> > He goes and talks with this African American city youth leader who then
> > talks to somebody in the fire department and then to somebody else, etc.
> > And so it goes. Hemming and hawing and watching the fun while I am being
> > injured and tortured and electrocuted and burnt 24 hours a day,
> > especially finessed during the time when I am sleeping. That way there
> > will not be even witnessed proof of the event happening ! What a brainy
> > set of people to have thought up such a macabre ghoulish scheme and put
> > it in operation with infinite resources of ghouls, materials, equipment
> > and vehicles and money and everything !

>
> As I said, until you do something really dangerous to yourself, your
> dementia is your own problem. Even your own family cannot get help
> for you unless you allow it. It is your personal responsibility to
> go out and get help with your mental health problems.
>
> -Chuck
>

3807. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 03:17:21 UTC
From: Spajky <Spajky##@volja.net>
Message-ID: <ogqadv4f20t8scfv6ho1c7lh5s2b2p3qt6@4ax.com>
Source record: 35108

On Tue, 27 May 2003 11:13:18 +0200, "Master of the universer ...
(but only when the wife is out\)" LOL :-)

<john.smith@micro$oft.com> wrote:

>Yea! I know I am plugging my homepages
>(http://w1.859.telia.com/~u85920178/) but I believe I am giving you a bit
>of good info.
Thats for sure....

Hello Sweeden!

very informative & educative site you have Harry (have been checking
it fast but for an hour almost... & saved a shortcut for it.... can be
useful sometimes... :-)

... but for inner links directly to the some circuit page can not be
saved directly to desktop for example because of that (js_script tag?)
preventing: "Trying to copy my work? Please view & print, but do NOT
steal!" stuff (which BTW can be easily circumvented for pics &
schematics !); so shortcuts can be made only by making a New Shortcut
from Win manually copying URL.... a little bit annoying....

I see you like to use also tin cans for stuff like VHF/UHF RX/TX
MONITOR.... :-)))) for prototypes ...

Well, about that TDA7000 RX found:
(http://w1.859.telia.com/~u85920178/rx/tda7000.htm)
(similar schematics here used: http://www.qsl.net/g3pho/tda7000.gif)
I wonder why nobody tried to enhance the RX with that DiL 18pin
Phillips chip to make it much much better receiver without any outside
chip additional active RF amplifieing to make out of it a
"SuperSensitive&selective" Rx, but just almost everybody uses just
basic schematics (maybe because is easier?).

It can be done with some additional circuitry (a bit complicates
schematics & is not so simple anymore); but the caracteristics of that
Rx can be vastely improved (sensitivity better for almost 30dB; much
better selectivity & AFC Range 10x or more narrower, better audio
sound, 100kHz-150MHz Rx range...)
..... & a "toy" chip Rx with no good characteristics becomes
SERIOUS stuff.... :-)))) (no s**t!) ... very usefull for wide
range of uses...
.... I wonder how Phillips guys writing datasheets did not
think better for enhanced application! (or maybe they did but did not
want to reveal us..)

Interested (how to) ? Mail me for mine genuine innovative idea
revealing it ! :-)) he he ...
(it took a long time to mature the final schematics..)

-- Regards, SPAJKY

Celly-1.0A@1.35GHz "Tualatin on BX-Slot1-MoBo!"
Modded Slotket & Enhanced* StandardFanCooling@defaultVcore
E-mail AntiSpam: remove ##

3808. HW 2035 P.S. Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 04:56:53 UTC
From: D & B Rude <brewman@merr.com>
Message-ID: <pqgBa.1044$vx3.672481@kent.svc.tds.net>
Source record: 35109

Uke & Martha Minaga
E-mail Address(es):
ukmart@maqs.net

Hello,
I am writing in behalf of the above Ham. He is looking for one or more Heathkit power supplies, for a project he is building. Seems he is in need of more then one if anyone has one/some. It is a 13.8 volt supply at about 2 amps.

If you can help him out please reply only by email to his address above. For the curious his call is W9DU. Appreciate the help. Thanks
Dave
KA9SRU

3809. Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 06:04:27 UTC
From: "Jose V. Gavila" <eb5agv@ctv.es>
Message-ID: <3ED5A2EB.EBC874CF@ctv.es>
Source record: 35110
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Hello John,

Adding to your offer, if somebody can pick it up, I have an original wood (reinforced with metal) military transport box for, you guessed it, the 8551. It is a nice construction, with heavy duty handles. I got it with an HP140T mainframe but it is clearly marked in large letters as made for an 8551 system.

Only 'small' detail is that I am in Valencia, Spain ;-)

Regards,

JOSE

John Miles wrote:
...
> I've been playing with the 8551/851 for the past several hours; it's
> amazing how well it works for something from the early-Apollo era. The
> filament-voltage regulation is pretty crappy thanks to some germanium
> transistors I never got around to replacing, but the electrolytics seem
> to be holding up well and the exotic parts (BWO, IF cavity amplifier,
> front-end mixer, CRT) are all still within or better than spec. It's
> still got a couple of decades' worth of life in it, I think. Certainly
> a much-better spectrum analyzer than the ones people are building with
> CATV tuners and the like.
>
> -- jm

--
---
73 EB5AGV / EC5AAU - JOSE V. GAVILA
La Canyada - Valencia (SPAIN)

Vintage Radio: http://jvgavila.com
Vintage Test Equipment: http://jvgavila.com/testeq.htm
European Boatanchors List: http://groups.yahoo.com/group/euro_ba_swap

3810. Fluke Multimeter Help - is this an 8020A please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 09:55:49 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3ed5d906$1_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 35111

Hi,

I've just bought (for next to nothing) what is probably an old Fluke 8020A. I say probably because it's actually badged "British Telecom" and seems to be given the type number "MMF 1A FIG 84/1". I assume that MMF means "Multi Meter Fluke". Anyway, externally it's identical to an 8020 type meter and the PCB is marked "Fluke 802X-A", so there's little doubt about it's origin. What I don't know though is whether it's an 8020, 8021 etc and I haven't been able to find anything useful about the 802x multimeters despite trying all the usual search sites (Google, Yahoo, Dogpile, AltaVista etc). There's plenty about the 8060 but very little about the 8020, 8021 etc. Fluke's own site seems to disclaim knowledge of it as well.

The meter is 3.5 digits and has just the basic ranges (DC volts to 1000, AC volts to 750, AC & DC mA to 2000, resistance to 20M ohms) and diode test. There's no frequency or continuity test and no sign of conductance ranges. If anybody can confirm which model it is from that I'll be very grateful. Any information on specs (particularly basic accuracy and AC capabilities) or calibration would be a great help as well.

Thanks in advance.
Hugh

3811. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 11:55:11 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <bb4sn3$l6e$1@bob.news.rcn.net>
Source record: 35112
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

As they say, the first step to recovery is recognizing that you
have a problem.... I hope that one day soon you can look around
and notice that others do not behave as you do, or fear the
things you do. That day would be a good one to make your first
step.

Best wishes,

-Chuck

news2020 wrote:
> Get lost creep. You must have a vested interest (policeman or something like
> that).
>
> Jellyfish that cannot say one word against the creeps that are injuring me
> even though I have reported to police more than one and a half years ago !!!

3812. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 13:47:52 UTC
From: news2020 <user1025@att.net>
Message-ID: <ccoBa.178579$ja4.9167993@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35113
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Get lost creep. I usually do not need to repeat this refrain. In your case, I am not sure it works. It is called stalking. Obsessive compulsive behavior. Like someone going after another persons 'ass' for no good reason. Hyenas seem to have this problem. When too many of them gather around, it is time for people to realize that their forest is not theirs any more.

"Chuck Harris" <cfharris@erols.com> wrote in message news:bb4sn3$l6e$1@bob.news.rcn.net...
> As they say, the first step to recovery is recognizing that you
> have a problem.... I hope that one day soon you can look around
> and notice that others do not behave as you do, or fear the
> things you do. That day would be a good one to make your first
> step.
>
> Best wishes,
>
> -Chuck
>
> news2020 wrote:
> > Get lost creep. You must have a vested interest (policeman or something like
> > that).
> >
> > Jellyfish that cannot say one word against the creeps that are injuring me
> > even though I have reported to police more than one and a half years ago !!!
>

3813. Re: Are you tellimg me !

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 14:16:16 UTC
From: David Stison <arc5@ix.netcom.com>
Message-ID: <3ED6162F.DDB01AF5@ix.netcom.com>
Source record: 35114
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

I see some of us are kicking the poor cripple again.
Do you really want to help push this obviously deranged man
over the edge? Ignore him and he'll look for attention
somewhere else- like maybe a doctor.

3814. Re: Are you tellimg me !

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 14:35:57 UTC
From: news2020 <user1025@att.net>
Message-ID: <hVoBa.178627$ja4.9171749@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35115
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Another creepy ditto-head. Ditto. Ditto. Ditto....

After a while you get the hang of the creeps. The brain just works like
clockwork.

"David Stison" <arc5@ix.netcom.com> wrote in message
news:3ED6162F.DDB01AF5@ix.netcom.com...
> I see some of us are kicking the poor cripple again.
> Do you really want to help push this obviously deranged man
> over the edge? Ignore him and he'll look for attention
> somewhere else- like maybe a doctor.

3815. Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 15:29:20 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb58rv$5r2nc$1@ID-150848.news.dfncis.de>
Source record: 35116

...IF amplifiers or Front Ends? Like, PCB's plus the bits

3816. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 15:42:00 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <bb5a0d$ps0$1@bob.news.rcn.net>
Source record: 35117
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Look hard at what I wrote, and mark which words you find threatening.
I would be interested in knowing why you find them threatening.

Best wishes,

-Chuck

news2020 wrote:
> Get lost creep. I usually do not need to repeat this refrain. In your case,
> I am not sure it works. It is called stalking. Obsessive compulsive
> behavior. Like someone going after another persons 'ass' for no good reason.
> Hyenas seem to have this problem. When too many of them gather around, it is
> time for people to realize that their forest is not theirs any more.
>
> "Chuck Harris" <cfharris@erols.com> wrote in message
> news:bb4sn3$l6e$1@bob.news.rcn.net...
>
>>As they say, the first step to recovery is recognizing that you
>>have a problem.... I hope that one day soon you can look around
>>and notice that others do not behave as you do, or fear the
>>things you do. That day would be a good one to make your first
>>step.
>>
>>Best wishes,
>>
>>-Chuck
>>
>>news2020 wrote:
>>
>>>Get lost creep. You must have a vested interest (policeman or something
>
> like
>
>>>that).
>>>
>>>Jellyfish that cannot say one word against the creeps that are injuring
>
> me
>
>>>even though I have reported to police more than one and a half years ago
>
> !!!
>

>
>

3817. Re: 2m SSB/CW rx

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 15:55:12 UTC
From: la8ak.xnd@online.no
Message-ID: <3ed62c71.412938359@news.online.no>
Source record: 35118
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Tue, 27 May 2003 11:13:18 +0200, "Master of the universer and
supreme ruler of all living beings \(but only when the wife is out\)"
<john.smith@micro$oft.com> wrote:

>> I want to build a homebrew 2m SSB/CW (possibly AM as well) Rx, that I
>> will use with my xtal controlled 2m TX.
>>
>> Anybody any info on circuits, or know if there are any commercial or
>> surplus boards out there I could make an rx with. I'm wanting to have
>> different bandwith for the modes.
>
>Hi Rich,
>What you ask could be very simple. 70MHz is a standard overtone crystal
>frequency, something like http://w1.859.telia.com/~u85920178/rx/zn414-m1.gif
>but with slightly different coils in the oscillator - oscillates at 70MHz
>and outputs 140MHz.
>
>Stuff this into a simple dual-gate FET, with antenna, just like TR2 in
>http://w1.859.telia.com/~u85920178/rx/tba120-rx-cct1.gif and you have made a
>144MHz to 4MHz converter.
>
>Now make your receiver for 4MHz to 5MHz = 144MHz to 145MHz.
>
>http://w1.859.telia.com/~u85920178/rx/reflex_rx.htm is a cheap and simple AM
>receiver.
>http://w1.859.telia.com/~u85920178/rx/quickrx.htm is an even simple SSB/CW
>receiver.
>http://w1.859.telia.com/~u85920178/rx/regenrx.htm is also easy, but a little
>"fiddley" witht he coils.
>http://w1.859.telia.com/~u85920178/rx/regen2.htm are more sensitive
>receivers.
it's simple to look at, but the audio transformers makes it
complicated to build . in real life

It was great expectations for using jfets in the 70's, many
applications were silly, and I see no reason for using MPF102 when
2N2222 is many times better in the audio

My site doesn't show such circuits, but I would be pleased to show
LA6LCA high grade 2m receiver with 70MHz xtal osc, 70MHz xtal filter
for LO and doubler to 2m, with 4-5MHz variable IF

73
Jan-Martin

LA8AK
http://home.online.no/~la8ak/c.htm

USA has the best democracy money can buy!

remove "postage" to reply

3818. Re: Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 16:04:51 UTC
From: Dave Null <nobody@frontier.net>
Message-ID: <slrnbdcbt1.gn5.nobody@animas.frontier.net>
Source record: 35119

On Thu, 29 May 2003 16:29:20 +0100, Richard hath writ:
> ...IF amplifiers or Front Ends? Like, PCB's plus the bits

Yes.

3819. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 16:18:37 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <NqqBa.1858$bN2.400@newsfep1-gui.server.ntli.net>
Source record: 35120
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

<kc5uea@satx.rr.com> wrote in message
news:aweBa.49612$ui.3131658@twister.austin.rr.com...
> Actually the Cobra 148GTL only has AM/SSB.
> The DX Models have CW/FM capability.
> The 148 is a very good radio,probably the best that uniden made.
> I have one with an unlocked "Voice Lock",Channel kit and Frequency Counter
> that i will be putting on 10M.
> I Also have a Cobra 2000 GTL which is the Base version of this radio.(it
is
> still stock)

Understand I (and the original poster) am talking from a UK perspective, and the GTL version was almost never seen here. If you ask someone for a Cobra 148, it is the GTL-DX model that they'll give you. Our legal CB system is FM only, so such radios were mainly used by illegal "freebanders" who used them for 27MHz SSB DX working. A non SSB variant like the GTL would have been no use to them, and so there was no point in smuggling one into this country.

As for the 2000, that was also a great rarity here and used to command quite a high price. Now that 10m monobanders are legal to import into the UK though, its much easier to get the Lincoln, 2830 and such sets, and the old channelised multimodes are much more realistically priced.

Unbelievably, I got 150GBP (over $200US) for my expanded 148 when I sold it only three years ago! Wouldn't get 70 for it now....

--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

3820. Re: Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 16:24:29 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb5c3a$5vutl$1@ID-150848.news.dfncis.de>
Source record: 35121

"Dave Null" <nobody@frontier.net> wrote in message
news:slrnbdcbt1.gn5.nobody@animas.frontier.net...
> On Thu, 29 May 2003 16:29:20 +0100, Richard hath writ:
> > ...IF amplifiers or Front Ends? Like, PCB's plus the bits
>
> Yes.

Lots of tranceiver boards about, but what I may want is to be able to buy a good SSB/CW/ poss AM IF amplifier. Then it would be nice if you could choose a particular RF front end for your desired band. I just don't seem to have come across something like this. Can always easily make the AF and PSU.

Know of any particular manifacturers?

3821. Wanted: Manual for TS-450S Kenwood

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 18:46:17 UTC
From: topgun <topgun@gnc.net>
Message-ID: <3ed65406$1_4@newsfeed>
Source record: 35122

Need manual for Kenwood TS-450S/AT transceiver. Prefer original, but would accept a good copy. I need help on this. Kenwood cannot provide this for me from their database, and I know of no other place to check. Many thanks for your help!
William in Florida

3822. Re: Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 19:12:17 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <IYsBa.102958$cO3.7315038@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35123

Hi Richard,
I've got a couple of designs on my website:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
You will find both AM and AM/SSB designs up there. There are ZIP files
which contain all of the design information, in PDF form, including
schematics, board layouts, and parts placement. If you choose, you can just
populate the portion of the board that you need. Since I have released this
information to the public domain, feel free to use the design information,
and tailor it to your own needs.
I have developed an I.F. amplifier board for my own
experimentation.....I still have yet to post it up the the
website.
I hope this helps.

Pete

Richard <nearlynews_email@ntlworld.com> wrote in message
news:bb5c3a$5vutl$1@ID-150848.news.dfncis.de...
>
> "Dave Null" <nobody@frontier.net> wrote in message
> news:slrnbdcbt1.gn5.nobody@animas.frontier.net...
> > On Thu, 29 May 2003 16:29:20 +0100, Richard hath writ:
> > > ...IF amplifiers or Front Ends? Like, PCB's plus the bits
> >
> > Yes.
>
> Lots of tranceiver boards about, but what I may want is to be able to
> buy a good SSB/CW/ poss AM IF amplifier. Then it would be nice if you
> could choose a particular RF front end for your desired band. I just
> don't seem to have come across something like this. Can always easily
> make the AF and PSU.
>
> Know of any particular manifacturers?
>

3823. Re: Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 19:14:57 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bb5m7g$t1i$1@titan.btinternet.com>
Source record: 35124

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bb58rv$5r2nc$1@ID-150848.news.dfncis.de...
> ...IF amplifiers or Front Ends? Like, PCB's plus the bits

I've got a DC Rx mixer module design on my web site, with a PCB design.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3824. ICOM IC-V100

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 19:20:47 UTC
From: Vince <vcl@sympatico.ca>
Message-ID: <i4tBa.6160$y77.628889@news20.bellglobal.com>
Source record: 35126

hi all, i am looking for the schematic for the programmer and the software
for the icom IC-V100 if anyone can help please email me thank you

Vince ve3elb
==========
Email: ve3elb@rac.ca
Visit My Webpage @
www.qsl.net/ve3elb

3825. Re: Need info on VN98AF power FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 19:23:22 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <K6tBa.102970$cO3.7315984@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35125

I've got the IRF-122 info; e-mail me directly without your anti-spammed address, and I will be glad to scan it for you.

Pete

Bob P <kb8tlHATESSPAM@yahoo.COM> wrote in message news:BydBa.4567$4G.2145174@newssvr28.news.prodigy.com...
> I picked up a bunch of VN98AF transistors on a broadband RF amplifier board.
> They are TO-3 case style types and I'm optimisitic that they might work up
> to 20 meters or so. Does anyone have any data sheets on these guys? I
> believe the IRF-122 is a replacement. ?
> thanks
> Bob
> (my return address is de-spamed)
> actual is kb8tl at yahoo dot com
>
> Funny how you can instantly find info on just about any vacuum tube ever
> produced in the last 80 years but 10 year old transistors, forget it!
>
>
>
>

3826. Re: HP 8901A ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 19:45:01 UTC
From: FrankW <fworm@mxznorpak.ca>
Message-ID: <3ED6633D.2070003@mxznorpak.ca>
Source record: 35127

It analyzes FM/AM/Phase modulation. Has a demodulated output
and can remote control and remote report.
They still sell them new at 21,000US, Still can get manuals
at around 200 dollars

Henry Kolesnik wrote:
> I've got one of these modulation analyzers that has problems and I'm
> wondering what use besides the counter and power meter function it might
> have in ham radio. I thought it had a tracking generator but from what I
> can tell it doesn't so it can't be signal generator but I 'm guessing it has
> the capability of being a receiver of sorts. Any ideas or a help with a
> manual appreciated.
> tnx
> hank wd5jfr
>
>

3827. Re: Need info on VN98AF power FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 22:18:51 UTC
From: Steve Ratzlaff <steveratz@eoni.com>
Message-ID: <3ED6874B.61E80C10@eoni.com>
Source record: 35128

And I already sent the VN98 specs to your direct email, deleting the (generally uselss) anti-spamming part. (Spambots are much more clever these days; the simple antispamming techniques they can easily get around.)
Steve AA7U

Pete KE9OA wrote:
>
> I've got the IRF-122 info; e-mail me directly without your anti-spammed
> address, and I will be glad to scan it for you.
>
> Pete

3828. So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 22:39:24 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb622h$652nk$1@ID-150848.news.dfncis.de>
Source record: 35129

I put into Google "455 Khz IF amplifier". I get 19 hits.

I put into Google "9 mhz IF amplifier" and I get 3 hits.

"10.7 Mhz If amplifier" and I get 26 hits.

Does no-one design these amplifiers any more?

Why so few hits? I though designers would be designing IF amplifiers
for their RX projects, and that the above searches would have produced
lots of hits.

3829. Re: Using modified CB radios as 28 Mhz tuneable IF's.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 23:23:50 UTC
From: nospam@nouce.bellatlantic.net
Message-ID: <3ed696e1.852582849@news.bellatlantic.net>
Source record: 35130
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

On Wed, 28 May 2003 22:54:14 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>That is incorrect. The Cobra 148 is a 120 Channel AM/FM/CW/SSB box with a
>"slider" that can easily be modified to cover the entire gap between the
>channels. This box may be more familiar in other countries as the SuperStar
>360.

The version I knew would be am but that could be wrong. Not much of a
Cobra fan then.

Actually an easy one to mod is the older RS TRC57 (not the later 457).
I did one for a friend as a really nice am/ssb/cw 10m rig. That would
be maybe a tough find but, a easy mod candidate and like cheap due to
age.

Allison

3830. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-29 23:46:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb65vu$634f8$1@ID-150848.news.dfncis.de>
Source record: 35131

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bb622h$652nk$1@ID-150848.news.dfncis.de...
> I put into Google "455 Khz IF amplifier". I get 19 hits.
>
> I put into Google "9 mhz IF amplifier" and I get 3 hits.
>
> "10.7 Mhz If amplifier" and I get 26 hits.
>
> Does no-one design these amplifiers any more?
>
> Why so few hits? I though designers would be designing IF amplifiers
> for their RX projects, and that the above searches would have produced
> lots of hits.

Of course, there are lots of IF amplifier circuits and front end
circuits. Esp. in books.

Just wish I could put in ("455 Khz IF amplifer module" SSB/CW) and
see dozens of 455 Khz SSB/CW IF modules. :c) Similar for front ends.

3831. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 00:21:57 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <3ED6A425.9090904@mailcity.moc>
Source record: 35134
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Do you morons know how to post to the intended group and not cross
post to groups that have no interested in anything you have on
your tiny brains? Take the rec.antiques.radio+phono group out of
your posting, no one there cares about your silly rantings.

news2020 wrote:
> Get lost creep. I usually do not need to repeat this refrain. In your case,
> I am not sure it works. It is called stalking. Obsessive compulsive
> behavior. Like someone going after another persons 'ass' for no good reason.
> Hyenas seem to have this problem. When too many of them gather around, it is
> time for people to realize that their forest is not theirs any more.
>
> "Chuck Harris" <cfharris@erols.com> wrote in message
> news:bb4sn3$l6e$1@bob.news.rcn.net...
>
>>As they say, the first step to recovery is recognizing that you
>>have a problem.... I hope that one day soon you can look around
>>and notice that others do not behave as you do, or fear the
>>things you do. That day would be a good one to make your first
>>step.
>>
>>Best wishes,
>>
>>-Chuck
>>
>>news2020 wrote:
>>
>>>Get lost creep. You must have a vested interest (policeman or something
>>
> like
>
>>>that).
>>>
>>>Jellyfish that cannot say one word against the creeps that are injuring
>>
> me
>
>>>even though I have reported to police more than one and a half years ago
>>
> !!!
>
>

>

3832. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 01:41:47 UTC
From: Tweetldee <dgmason99@att99.net>
Message-ID: <vFyBa.179226$ja4.9224694@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35133

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bb65vu$634f8$1@ID-150848.news.dfncis.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:bb622h$652nk$1@ID-150848.news.dfncis.de...
> > I put into Google "455 Khz IF amplifier". I get 19 hits.
> >
> > I put into Google "9 mhz IF amplifier" and I get 3 hits.
> >
> > "10.7 Mhz If amplifier" and I get 26 hits.
> >
> > Does no-one design these amplifiers any more?
> >
> > Why so few hits? I though designers would be designing IF amplifiers
> > for their RX projects, and that the above searches would have produced
> > lots of hits.
>
>
> Of course, there are lots of IF amplifier circuits and front end
> circuits. Esp. in books.
>
> Just wish I could put in ("455 Khz IF amplifer module" SSB/CW) and
> see dozens of 455 Khz SSB/CW IF modules. :c) Similar for front ends.
>

That's funny.. when I put in 455 Khz IF amplifier, I get over 4,000 hits.
Are you enclosing the entire string in quotes? Try the search without them
and see the results. Remember, when people author web pages, sites, and
newsgroup posts, they may not phrase everything exactly as you do. Loosen
up a bit on the search terms and you'll get lots more hits. Try different
words in your search that mean the same thing. For instance, some people
may call it an "IF strip" instead of an "IF amplifier".
Go Googling again and be more flexible.
--
Tweetldee
Tweetldee at att dot net (Just subsitute the appropriate characters in the
address)

Time is what keeps everything from happening all at once.

3833. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 02:02:15 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <3ED6BBA7.6080308@mailcity.moc>
Source record: 35137
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Chuck Harris wrote:
> Hey JJ,
>
> From what group did I read this posting? From what group do I
> usually post?
>
> Don't know? Gee, guess who's really the moron?

Since I do not know from which group this originated, I posted it to all the groups except the RAR+P group, as I do know how to remove a group from the list, something you obviously do not, so who's really the moron?

3834. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 02:57:22 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <bb6hip$21m$1@bob.news.rcn.net>
Source record: 35135
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

Hey JJ,

From what group did I read this posting? From what group do I
usually post?

Don't know? Gee, guess who's really the moron?

-Chuck

JJ wrote:
> Do you morons know how to post to the intended group and not cross post
> to groups that have no interested in anything you have on your tiny
> brains? Take the rec.antiques.radio+phono group out of your posting, no
> one there cares about your silly rantings.

3835. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 03:26:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0305291926.661bd93e@posting.google.com>
Source record: 35136

My recommendation: don't limit your search quite so much. Drop the
"IF" part, or put in the search string without quotes. Try putting
the units next to the digits of the frequency: 455kHz, 9MHz and
10.7MHz for example. Try it without the frequency specified; it's
often easy to adapt ideas from one design to other frequencies anyway.
I got LOTS of hits with just 455kHz IF amplifier as the search
string.

Cheers,
Tom

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<bb622h$652nk$1@ID-150848.news.dfncis.de>...
> I put into Google "455 Khz IF amplifier". I get 19 hits.
>
> I put into Google "9 mhz IF amplifier" and I get 3 hits.
>
> "10.7 Mhz If amplifier" and I get 26 hits.
>
> Does no-one design these amplifiers any more?
>
> Why so few hits? I though designers would be designing IF amplifiers
> for their RX projects, and that the above searches would have produced
> lots of hits.

3836. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 04:21:05 UTC
From: --Bill-- <exray.is.tired@of.spam>
Message-ID: <vddmulmn45ref5@corp.supernews.com>
Source record: 35138
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

```
JJ wrote:
>
>
> Chuck Harris wrote:
>
>> Hey JJ,
>>
>> From what group did I read this posting? From what group do I
>> usually post?
>>
>> Don't know? Gee, guess who's really the moron?
>
>
> Since I do not know from which group this originated, I posted it to all
> the groups except the RAR+P group, as I do know how to remove a group
> from the list, something you obviously do not, so who's really the moron?
>

I suggest removing all groups from any further replies :-)
-Bill
```

3837. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 06:10:00 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0305292210.43b931a3@posting.google.com>
Source record: 35139

"Tweetldee" <dgmason99@att99.net> wrote in message
news:<vFyBa.179226$ja4.9224694@bgtnsc05-news.ops.worldnet.att.net>...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:bb65vu$634f8$1@ID-150848.news.dfncis.de...
> >
> > "Richard" <nearlynews_email@ntlworld.com> wrote in message
> > news:bb622h$652nk$1@ID-150848.news.dfncis.de...
> > > I put into Google "455 Khz IF amplifier". I get 19 hits.
> > >
> > > I put into Google "9 mhz IF amplifier" and I get 3 hits.
> > >
> > > "10.7 Mhz If amplifier" and I get 26 hits.
> > >
> > > Does no-one design these amplifiers any more?
> > >
> > > Why so few hits? I though designers would be designing IF amplifiers
> > > for their RX projects, and that the above searches would have produced
> > > lots of hits.
> >
> >
> > Of course, there are lots of IF amplifier circuits and front end
> > circuits. Esp. in books.
> >
> > Just wish I could put in ("455 Khz IF amplifer module" SSB/CW) and
> > see dozens of 455 Khz SSB/CW IF modules. :c) Similar for front ends.
> >
> ---
> That's funny.. when I put in 455 Khz IF amplifier, I get over 4,000 hits.
> Are you enclosing the entire string in quotes? Try the search without them
> and see the results. Remember, when people author web pages, sites, and
> newsgroup posts, they may not phrase everything exactly as you do. Loosen
> up a bit on the search terms and you'll get lots more hits. Try different
> words in your search that mean the same thing. For instance, some people
> may call it an "IF strip" instead of an "IF amplifier".
> Go Googling again and be more flexible.

You did pretty well to get that many hits, and there should be enough
in them to answer any sane design questions - how many do you want,
how many ways are there to design an IF amp on ANY frequency? If you
want more detail, you will need to go to a decent (probably
university) library. What precisely do you want that hasnt been
covered in what you have found?
Andrew VK3BFA

3838. Re: Have you really LOOKED at #1291?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 06:50:27 UTC
From: Richard Freeman <deletemerichard@atps.net>
Message-ID: <3ed6feca$1_1@news.iprimus.com.au>
Source record: 35140
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

"David L. Stinson" <arc5@ix.netcom.com> wrote in message
news:3ED54B69.15E6298A@ix.netcom.com...
> Can one of you bit-heads get a bead on this whack-o?

Which Whacko ?????

Central Control os posting via http://www.meganetnews.com/ so his details
are invisible (unless you have access to meganets records) and NEWS2020 is a
fruit loop dial up user of att.net dialling into san jose ......

3839. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 07:10:20 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <p7HABuGcPw1+EA+O@ifwtech.co.uk>
Source record: 35048

Richard wrote:
>I put into Google "455 Khz IF amplifier". I get 19 hits.
>
>I put into Google "9 mhz IF amplifier" and I get 3 hits.
>
>"10.7 Mhz If amplifier" and I get 26 hits.
>
>Does no-one design these amplifiers any more?
>
>Why so few hits?

If you actually used the quotation marks, Google will only find sites that contain that complete phrase, exactly as written. If you didn't, it will ignore the bare numbers "9" and "455", and also common English linking words like "the", "and" and... "if".

www.google.com/advanced_search.htm is actually easier to use than the plain one-line version, because it lets you fill in a more detailed form.

> I though designers would be designing IF amplifiers
>for their RX projects, and that the above searches would have produced
>lots of hits.
>
Try Hands Electronics at www.rf-kits.demon.co.uk As the name implies, those are kits.

Also there's a superb SSB/CW IF strip at the Warrington ARC site (maybe www.warc.org.uk?) in the "CDG2000 transceiver" section.

Both of these references also have modules for other parts of a transceiver: synthesizers, mixers and band filtering, and transmit exciters.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3840. Re: So few hits. Why is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 08:44:29 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb75ha$62g9m$1@ID-150848.news.dfncis.de>
Source record: 35141

"Tweetldee" <dgmason99@att99.net> wrote in message
news:vFyBa.179226$ja4.9224694@bgtnsc05-

> That's funny.. when I put in 455 Khz IF amplifier, I get over 4,000
hits.

Still little luck finding say a 455 Khz IF amplifier circuit on the web.

Not that easy.

3841. Re: Have you really LOOKED at #1291?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 10:22:35 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <vde8np20afc7b9@corp.supernews.com>
Source record: 35142
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

If YOU know, why don't you help to sanction him/her/it and leave the "X
files" to cable tv?

Yes, I am allowing the crosspost because interested souls are "out there",
but let's shut this one down.
"Richard Freeman" <deletemerichard@atps.net> wrote in message
news:3ed6feca$1_1@news.iprimus.com.au...
>
> "David L. Stinson" <arc5@ix.netcom.com> wrote in message
> news:3ED54B69.15E6298A@ix.netcom.com...
> > Can one of you bit-heads get a bead on this whack-o?
>
> Which Whacko ?????
>
> Central Control os posting via http://www.meganetnews.com/ so his details
> are invisible (unless you have access to meganets records) and NEWS2020 is
a
> fruit loop dial up user of att.net dialling into san jose ......
>
>

3842. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 12:09:15 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <t3iedv0qlis0i7p3nkenufdc18r1p15n31@4ax.com>
Source record: 35143

Hi.

Incase anyones interested, I've almost finished a little program to help in making a dish.

<http://www.nospagetti.co.uk/dish_design.zip>

I'm not sure how far to expand the petals out from the real circular dish curve, but it looks sort of correct to me. The petals are cut from flat sheet. ALSO, the, I've yet to finish the 'Print Petal' routine, it only prints out on one sheet atm.

Feel free to let me know if I have it completely wrong, but be gentle :)

Heres a piccy of a wooden former I've made with the help of this program ...

<http://www.nospagetti.co.uk/dish.jpg>

It's for building a couple of grid dishes btw, the wire on their atm is just a test to see how easy it is to wire up.

Regards

Clive

3843. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 12:14:07 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <tmiedv4uijns0ftctvhmhqaaqvv5j1skhf@4ax.com>
Source record: 35144

ps. if anyone wants the source code, your welcome to it. It's written in Borland Delphi 6.

Clive

3844. Re: Wanted: Manual for TS-450S Kenwood

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 13:09:17 UTC
From: Svein Olav Leithe <la9eha.nospam@online.no>
Message-ID: <uKlBa.2712$Hb.53224@news4.e.nsc.no>
Source record: 35145

"topgun" <topgun@gnc.net> wrote in message news:3ed65406$1_4@newsfeed...
> Need manual for Kenwood TS-450S/AT transceiver. Prefer original, but would
> accept a good copy. I need help on this. Kenwood cannot provide this for
me
> from their database, and I know of no other place to check. Many thanks
for
> your help!
> William in Florida
>

Check out:

www.mods.dk

Select Kenwood. In the lefthand side of your screen there is a item called manuals (they are actually on an other site). Go there and you will find manuals for your TS-450 as well as schematics.

Good luck!

--
73 de LA9EHA, Svein
Kristiansand, Norway

3845. Re: Fluke Multimeter Help - is this an 8020A please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 14:31:40 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <arnddvgavtcs3nqj6evi7tm0pebpbkin64@4ax.com>
Source record: 35146

On Thu, 29 May 2003 10:55:49 +0100 "Hugh Colborn"
<dontspamstockden@tiscali.co.uk> wrote:

>I've just bought (for next to nothing) what is probably an old Fluke 8020A.
>I say probably because it's actually badged "British Telecom" and seems to
>be given the type number "MMF 1A FIG 84/1". I assume that MMF means "Multi
>Meter Fluke". Anyway, externally it's identical to an 8020 type meter and
>the PCB is marked "Fluke 802X-A", so there's little doubt about it's origin.

I have an 8020 B here that I just opened and the board is labeled
802X-B, with some other numbers below it, including a revision letter.
This one also has a smaller daughter board on top of the main board.

>The meter is 3.5 digits and has just the basic ranges (DC volts to 1000, AC
>volts to 750, AC & DC mA to 2000, resistance to 20M ohms) and diode test.
>There's no frequency or continuity test and no sign of conductance ranges.

This one has conductance (milli and nano Siemens.) I thought the diode
test also tested continuity.

>If anybody can confirm which model it is from that I'll be very grateful.
>Any information on specs (particularly basic accuracy and AC capabilities)
>or calibration would be a great help as well.

I have a manual for this somewhere, but it doesn't sound quite the
same. I'll look for it.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

3846. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 15:45:57 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3ED77BCF.83CE0F78@gte.net>
Source record: 35047

c.a.m@antispam.blueyonder.co.uk wrote:

> Hi.
>
> Incase anyones interested, I've almost finished a little program to help in
> making a dish.
>
> <http://www.nospagetti.co.uk/dish_design.zip>
>
> I'm not sure how far to expand the petals out from the real circular dish curve,
> but it looks sort of correct to me. The petals are cut from flat sheet. ALSO,
> the, I've yet to finish the 'Print Petal' routine, it only prints out on one
> sheet atm.

As important as designing a surface is, it is equally important to select an F/D that can be illuminated by a real world feed.

Dale W4OP

3847. Re: Fluke Multimeter Help - is this an 8020A please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-30 18:34:49 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3ed7a428_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 35049

"Jim Adney" <jadney@vwtype3.org> wrote in message
news:arnddvgavtcs3nqj6evi7tm0pebpbkin64@4ax.com...
> On Thu, 29 May 2003 10:55:49 +0100 "Hugh Colborn"
> <dontspamstockden@tiscali.co.uk> wrote:
>
>
> I have an 8020 B here that I just opened and the board is labeled
> 802X-B, with some other numbers below it, including a revision letter.
> This one also has a smaller daughter board on top of the main board.

Thanks Jim,

Based on information kindly sent to me by Fred McKenzie it looks as though what I have is an 8021A. It doesn't have the daughterboard but that may be one of the differences between the A and B models.

> This one has conductance (milli and nano Siemens.) I thought the diode
> test also tested continuity.

Interestingly, although it's not marked anywhere on the meter, I've now discovered (again with Fred's help) that my meter does have a working 2mS conductance range but not the Nano Siemens one. The diode test function certinaly works (produces enough voltage to turn on a diode junction) but I'd assumed that any continuity function would produce an audible beep or buzz. My meter certainly doesn't do that.

Anyway, thanks very much for replying to my query. Your information is much appreciated.

Regards,
Hugh

3848. Re: Homebrew valve CW/DSB transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 01:01:23 UTC
From: j78250@aol.com
Message-ID: <20030530210123.06973.00000175@mb-m17.aol.com>
Source record: 35050

Just met a fellow ham here in San Antonio. We're both disabled and neither of us have done code since getting our tickets. I've been looking for a good QEP project he and I could do together and get back into code. Any help would be appreciated...

Jim N5PFU San Antonio TX

3849. Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 08:55:22 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb9qik$79i2g$1@ID-150848.news.dfncis.de>
Source record: 35051

If you have not already done it, could somone please take the module approach to designing.

I'm after flexibility, and to builld up a collection of RX Front End modules , IF modules, VFO modules , PSU modules, RF amp modules etc.

And if anyone takes that approach could you please identify in your web pages the modules, I mean if you design a 455 Khz IF module, then somewhere in the page or page title write "455 Khz IF module". :c)

Also, if anyone has a web page where the RX (or even TX I suppose) is broken down into modules as part of it's construction then please post the URL and I'll take a look.

I think there should be a "modular design" movement in amateur radio. :c)

Of course there are probably lots on RX modules around, Particularly in textbooks. Anyone care to create webpages based on a "modular design" basis. Each page is dedicated to the fundamental RX modules for instance) or even TX modules.

If not, I'll try to do it myself, but I cannot design. So circuits will have to be others with permission.

Rich.

P.S. Offbeat post I know, but I think there is some merit in the idea of modularisation, in particular the presentation of designed units as modules on a web page or pages.

3850. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 09:50:34 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb9ton$7dmie$1@ID-150848.news.dfncis.de>
Source record: 35052

Richard wrote:
> If you have not already done it, could somone please take the module
> approach to designing.
>
> I'm after flexibility, and to builld up a collection of RX Front End
> modules , IF modules, VFO modules , PSU modules, RF amp modules etc.

I'm saying that the design of module has it's own PCB, so you can make just an IF amplifier, or just a RF front-end.

But, I think the designer will say there are particular difficulties with modules. It's okay if you design one module in relation to another, but hard to ensure one module fits in with a "foreign" module. Okay you can try to standardise the supply voltages. Or you could even have seperate supplies for each module. But what do you do with AGC, if you ever wanted to try another IF module with the RX front-end? Probably the person tring to connect the modules would have to design an interface to make the AGC compatible.

Anyway, I still prefer my RX's to be modularised.

Of course, all RX's are essentially modular, because you can break it down as such in circuit terms. Nice though if things were broken down in PCB terms.

In any event, if your design is broken down in PCB modules, then perhaps you could indicate this by writing, for example, "455 Khz IF module" or "RF front-end" somewhere in your webpages.

Rich.

3851. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 09:55:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bb9u2n$70la4$1@ID-150848.news.dfncis.de>
Source record: 35053

Richard wrote:

>
> In any event, if your design is broken down in PCB modules, then
> perhaps you could indicate this by writing, for example,
> "455 Khz IF module" or "RF front-end" somewhere in your webpages.
>
> Rich.

Eratta: "RF front-end module". I think "module" included is much better
for searching. "Module" should always be the end word in the string.
Ie, "PSU module" etc etc. Not essential, but particularly if you
created PCB for the module.

3852. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 13:11:49 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bba9hu$72n6s$1@ID-150848.news.dfncis.de>
Source record: 35054

Richard wrote:

> Eratta: "RF front-end module". I think "module" included is much
> better for searching. "Module" should always be the end word in the
> string. Ie, "PSU module" etc etc. Not essential, but particularly if
> you created PCB for the module.

Actually maybe that should be the criteria, you write "RF front-end module" if indeed you have a PCB designed that goes with the module. But, that could be too restrictive, not though if one is only interested in modules with PCB designed already.

One wonders whether there should be some kind of nomenclature (it that is the right word) for webpages, something that can make finding circuits easier. The way to do that would be to settle on complete word strings. Most of the time with searches I get pages that are not what I want. I tried searching for pages that showed 455 Khz IF amplifier designs. Very slim pickings. But, maybe there are non, or very few.

Probly unworkable, but with my web pages, if the content showed a 455 Khz IF amplifiier circuit or was a complete construction module I would ensure that I wrote in the pages "455 IF amplifier circuit" or "455 Khz IF amplifier module". But, that's just me.

3853. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 13:27:17 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Xz7Ca.33$784.80865@newsfep1-win.server.ntli.net>
Source record: 35061

> P.S. Offbeat post I know, but I think there is some merit in the idea of
> modularisation, in particular the presentation of designed units as
> modules on a web page or pages.
==========
The modular approach is also promoted in a recent ARRL publication (book) :
Experimental Methods in RF Design , by W7ZOI , KK7B and W7PUA.

A superb (practical) book encouraging home brewing .

Frank GM0CSZ / KN6WH

3854. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 13:31:33 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bbaarl$pn4$2@titan.btinternet.com>
Source record: 35055

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bb9qik$79i2g$1@ID-150848.news.dfncis.de...
> If you have not already done it, could somone please take the module
> approach to designing.
>
> I'm after flexibility, and to builld up a collection of RX Front End
> modules , IF modules, VFO modules , PSU modules, RF amp modules etc.

I'm working on a simple HF mixer module PCB. The schematic is here:

http://www.geocities.com/leon_heller/mixer.html

I hope to have a prototype unit working over the weekend.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3855. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 16:00:53 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Vk4Ca.810994$Zo.167330@sccrnsc03>
Source record: 35056

Whoever started this thread is having a search engine problem. If you'll correct that, you will have no problem finding yourself saturated with designs. Google turns up 15,000 hits for 455 KHz IF in 0.78 seconds.

What you initially asked for, is readily available in a half dozen books and any collection of old magazines. (Even in some new ones) Try solid state design by Hayward and DeMaw, Introduction to RF design by Hayward, and Experimental methods in RF design by Hayward, Campbell and Larkin. Any or all of these ought to be in your personal library if you have any serious intentions other than trying to standardize other folks web designs.

W4ZCB

3856. Re: Fluke Multimeter Help - is this an 8020A please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 16:42:11 UTC
From: fmmck@aol.com
Message-ID: <20030531124211.19481.00000826@mb-m10.aol.com>
Source record: 35057

<< Interestingly, although it's not marked anywhere on the meter, I've now discovered (again with Fred's help) that my meter does have a working 2mS conductance range but not the Nano Siemens one. The diode test function certinaly works (produces enough voltage to turn on a diode junction) but I'd assumed that any continuity function would produce an audible beep or buzz. My meter certainly doesn't do that. >>

Hugh-

Back home, I took a look at my 8020A meter. It has different markings than the 8020B in the catalog.

There are only three columns: current, voltage and resistance. The 20 Megohm button is only used for resistance and conductance. It is used in conjunction with the 2000 KOhm button for nS and the 2 KOhm button for mS. Although the manual tells how to access the 2 mS conduction scale, it is not shown on the meter itself. Perhaps yours is documented in the 8021A manual? (The 200 nS buttons are indicated by a "grayed" area between the scales beside the two buttons.)

According to the manual, DC voltage is 0.25% of reading plus or minus one digit on all ranges.

AC voltage accuracy is more complicated, depending on range and frequency. Basically it is 0.75% +/- 2 digits from 45 to 1000 Hz, except 1% on the highest (750 volt) scale. From 1 kHz to 2 kHz it is 1.5% +/- 3 digits up to the 200 volt scale. It isn't rated at the highest scale. From 2 kHz to 5 kHz, it is 5% +/- 5 digits up to the 20 volt scale, and not rated above that.

Resistance is 0.2% of reading +/- one digit except 0.3% +/- 3 digits on the 200 Ohm scale and 2.0% +/- 1 digit on the 20 Megohm scale.

Conductance is 0.3% +/- 1 digit on the 2 mS scale and 2.0% +/- 10 digits on the 200 nS scale.

DC Current is 0.75% +/- 1 digit on all ranges.

AC Current is 2% +/- 2 digits on the 2 mA scale from 45 to 450 Hz, 1.5% +/- 2 digits on the 20, 200 and 2000 mA scales from 45 Hz to 1 kHz.

You asked about calibration procedures, which you can get from an 8021A manual. Actually, I suggest you not touch it unless you have access to laboratory standards. Recently I purchased a couple of old Fluke bench meters. Comparing them both with the old 8020A on various voltages and resistances, they were all exactly the same except for one measurement: a 13.80 volt power supply measurement differed by one digit (.01 volts). Unless someone has messed up your calibration, it is most likely still better than anything else you have!

73, Fred, K4DII

3857. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 16:42:18 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vdhn378m40mjcc@corp.supernews.com>
Source record: 35058

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bb9qik$79i2g$1@ID-150848.news.dfncis.de...
> If you have not already done it, could somone please take the module
> approach to designing.

I think every designer takes a modular approach to designing.

> I'm after flexibility, and to builld up a collection of RX Front End
> modules , IF modules, VFO modules , PSU modules, RF amp modules etc.

If you look at the various designs on the web, you will find that most designers steal liberally from other designers. Each radio may have one unique circuit, or perhaps assemble circuits in a novel way, but most of the circuits will be tried and true designs pioneered by someone else.

> And if anyone takes that approach could you please identify in your web
> pages the modules, I mean if you design a 455 Khz IF module, then
> somewhere in the page or page title write "455 Khz IF module". :c)

People don't do this, because it isn't really useful. While the idea itself may be somewhat portable, the design has to fit into a particular radio, and there are so many variables that the chances of picking up a circuit that can be dropped right in are slim.

Consider a simple mixer. You might have an active mixer, a passive mixer or a Tayloe mixer. You can't drop a Tayloe mixer in where an active mixer used to be, because the Tayloe mixer needs a quadrature LO. And the passive mixer won't drop in because it needs higher levels of input and LO. Of course, there are also an unlimited number of IF and input frequency possibilities, all of which affect the design. One of the main differences between various receiver designs is the distribution of gain throughout the receiver. Guess what, that affects every stage. Were you to come up with a generic mixer module, it might work in one in a million designs. You might get a little better hit rate with front ends, and there are lots of VFOs out there because the VFO has no inputs and only one output, so the hit rate tends to be a little better. Same with audio stages which have only one or two inputs (audio and mute). But for the rest of the stages, trying to make something generic is somewhat of a loosing proposition.

Hands, Kanga and others sell various modules. The result tends to be a little unsatisfying. The radios tend to be somewhat lower performance and higher price, as well as a lot larger, than radios designed to fit together.

> Also, if anyone has a web page where the RX (or even TX I suppose) is
> broken down into modules as part of it's construction then please post
> the URL and I'll take a look.

Generally, the construction isn't broken apart. Not only is there little advantage, but users of the modules aren't likely to be able to manage the layout that well. Remember, lots of the parts are at RF, and RF doesn't like to stay in the wires as well as you would wish.

One recent example, tho, is the Multi-Pig+. A half-dozen or so examples were shown at FDIM this year, and it does appear that builders can put together a handful of modules and come up with working radios that look quite different. However, the modules work together, they really aren't as generic as you would like. And the resulting radios are pretty large compared to the capability.

> If not, I'll try to do it myself, but I cannot design. So circuits will
> have to be others with permission.

No reason you can't design. There are plenty of examples of how to get from A to B, and you can model the circuits with Spice pretty easily, so you can get an idea of the performance before committing them to copper. And take a look at the Manhattan construction technique popularized by K8IQY as a way to avoid having to etch boards. It can certainly ease experimentation.

> P.S. Offbeat post I know, but I think there is some merit in the idea of
> modularisation, in particular the presentation of designed units as
> modules on a web page or pages.

There is merit, of course. But the price is very high - too high for most hams who are typically looking to get good performance at a low price. Homebrewers in particular tend to build a radio, use it for a short while, then build another. They aren't going to spend $400 for the same sort of performance they could get for 100. But that's the sort of price differential I observe for the modular approach.

..

3858. Re: Fluke Multimeter Help - is this an 8020A please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 18:15:30 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <blbgdv0fi6ovcb8787gaok69qrljkjfu5q@4ax.com>
Source record: 35059

On Fri, 30 May 2003 09:31:40 -0500 Jim Adney <jadney@vwtype3.org>
wrote:

>I have a manual for this somewhere, but it doesn't sound quite the
>same. I'll look for it.

I should have added that Fluke, at least at one time, took pride in
making manuals available for any device they had ever made. They
weren't free, but they were reasonable. I had to buy the manual for my
8020B because it needed repairs and the manual included a schematic
and parts list.

You might tty contacting them and seeing if they can sell you a manual
for your 8021A. The manuals folks might be able to remember that such
a DVM actually existed. ;-)

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

3859. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 18:53:12 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <bbatmo$ge0$1@freenet9.carleton.ca>
Source record: 35060

"Harold E. Johnson" (W4ZCB@mchsi.com) writes:
> Whoever started this thread is having a search engine problem. If you'll
> correct that, you will have no problem finding yourself saturated with
> designs. Google turns up 15,000 hits for 455 KHz IF in 0.78 seconds.
>
> What you initially asked for, is readily available in a half dozen books and
> any collection of old magazines. (Even in some new ones) Try solid state
> design by Hayward and DeMaw, Introduction to RF design by Hayward, and
> Experimental methods in RF design by Hayward, Campbell and Larkin. Any or
> all of these ought to be in your personal library if you have any serious
> intentions other than trying to standardize other folks web designs.
>
> W4ZCB
>
>
Those books do make great webpages. And they have wonderful built in
search engines at the back, so you can usually find what you want very
rapidly.

There's also the equivalent of the Web for books, which some like
to call a library. Full of those old style webpages, and easily accessible
without a computer. Those library places have search engines too, though
some may still have them in the form of a paper card catalog. And
the information is nicely clustered, so if you find one book of use
to a topic, the other books with the same topic are right next to
it. Some Dewey guy set that up at least a few decades ago.

Michael VE2BVW

3860. Info for FRR/49(v) mil receiver wanted also looking for plug-in units for this rec.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 20:47:14 UTC
From: Sam <aa8wl@comcast.net>
Message-ID: <OLWdnceDKebtiUSjXTWcog@comcast.com>
Source record: 35062

Hi, name is Sam and I am looking for info about an older rack mount receiver FRR/49(v) which uses plug in drawers for different freq. ranges. I am looking for a couple plug in units and also the storage cabinet for extra units which are being used. And if anyone knows of a "Guru" for TMC items like this receiver I would like to get in contact with them to gather information on these hy-bred receivers. TNX in advance and 73' de aa8wl Sam near Detroit, MI

You may reply directly to: aa8wl@comcast.net

3861. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 21:17:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbb61e$7rf3g$1@ID-150848.news.dfncis.de>
Source record: 35063

Harold E. Johnson wrote:
> Whoever started this thread is having a search engine problem. If
> you'll correct that, you will have no problem finding yourself
> saturated with designs. Google turns up 15,000 hits for 455 KHz IF
> in 0.78 seconds.
>
> What you initially asked for, is readily available in a half dozen
> books and any collection of old magazines. (Even in some new ones)
> Try solid state design by Hayward and DeMaw, Introduction to RF
> design by Hayward, and Experimental methods in RF design by Hayward,
> Campbell and Larkin. Any or all of these ought to be in your personal
> library if you have any serious intentions other than trying to
> standardize other folks web designs.
>
> W4ZCB

Look at how many hits show 455 Khz IF circuits or construction articles.
Very few. You have to really search. This may be because there are not
that many 455 Khz IF circuits on the web. If so a pity, I'd like to
build one around good quality filters, like Collins filters, or
whatever.

Getting those books I agree would be a good thing to do. Although I was
hoping to just copy someone else's designs. :c) Why not, why re-invent
the wheel if there is something out there that is okay for ones needs..

3862. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 23:16:51 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbbd1m$7lbii$1@ID-150848.news.dfncis.de>
Source record: 35064

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
>
> Consider a simple mixer. You might have an active mixer, a passive
mixer or
> a Tayloe mixer. You can't drop a Tayloe mixer in where an active
mixer used
> to be, because the Tayloe mixer needs a quadrature LO. And the
passive
> mixer won't drop in because it needs higher levels of input and LO.
Of
> course, there are also an unlimited number of IF and input frequency
> possibilities, all of which affect the design. One of the main
differences
> between various receiver designs is the distribution of gain
throughout the
> receiver. Guess what, that affects every stage. Were you to come up
with a
> generic mixer module, it might work in one in a million designs. You
might
> get a little better hit rate with front ends, and there are lots of
VFOs out
> there because the VFO has no inputs and only one output, so the hit
rate
> tends to be a little better. Same with audio stages which have only
one or
> two inputs (audio and mute). But for the rest of the stages, trying
to make
> something generic is somewhat of a loosing proposition.

Understood.

I guess it's more realistic just to expect a modular approach to a
particular overall RX or TX design. In the sense of the modular parts
build on seperate PCB's.

For the RX I was thinking of "typical" modules for a superhet. That
would mean active mixer, but the gain distribution issue is important.

3863. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-05-31 23:23:21 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbbdde$7qput$1@ID-150848.news.dfncis.de>
Source record: 35065

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:Vk4Ca.810994$Zo.167330@sccrnsc03...

> What you initially asked for, is readily available in a half dozen
books and
> any collection of old magazines. (Even in some new ones).

Yep, I figure. I'm being kinda lazy in relying on the web. :c)

3864. FA: Fil xfmrs:Halli, Stancor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 12:29:51 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <3lmCa.182096$ja4.9488270@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35066

Filament transformers by Hallicrafters, Stancor, ... with others coming
shortly.
Search on ebay by seller:
heytubeguy

3865. OT RCA infrared remote signal structure

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 15:23:36 UTC
From: tk <gamach1@ispwest.com>
Message-ID: <3EDA1A78.AB90590B@ispwest.com>
Source record: 35067

I have an RCA Direct TV receiver that uses an RCA universal 46 key
remote.Does anyone know the bit structure that is used in the IR signal.

The RCA site has nothing about signal protocol.

Thanks

Ted in Atlanta KD4EE

3866. Re: (mildly OT) Anyone got three 2708 or MCM2708 EPROMS?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 17:44:13 UTC
From: Dave Hills <dhills@mindspring.com>
Message-ID: <3EDA3B9F.37A56AAC@mindspring.com>
Source record: 35068

How many do you need?

Dave

john graesser wrote:
>
> "James Spriggs" <See.Message.Text@forReply.net> wrote in message
> news:3ed0b410$0$924$afc38c87@news.optusnet.com.au...
> >
> > "Scott" wrote in message
> > > How does one "refurbish" an IC???
> >
> > By removing IC's from scrapped PCB's and
> > (sometimes) desoldering the legs cleanly, and
> > (sometimes) straighting the legs, and
> > (soemtimes) UV erasing the memory contents for Eproms.
> >
> > Jim
>
> I remember the scrappers used to mark IC's rfe (removed from equipment), I
> have never seen anything marked refurbished. I still have some in working
> equipment, so until they break the parts won't be available from me.
> thanks, John.
> KC5DWD

3867. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 19:02:15 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <X4sCa.182554$ja4.9520648@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35069

Hi Richard,
This website might prove helpful:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
I went through the same thing that you are going through, many years ago, so I had to design my own I.F. strip. The AGC portion was another nightmare; I tried the ARRL AGC circuits, but they weren't satisfactory for my purposes, so I needed to design my own. My early I.F. systems used a pair of MC1350 chips; along with an op-amp in the AGC loop. They worked very well, but when I discovered the TDA1072/TDA1572 chips, I decided to go with that route in my newer designs. These Phillips chips have the detector and AGC amplifier on board, and the 1572 has an I.F. output, suitable for feeding SSB and FM detectors. This is exactly how the designer of the AOR7030 implemented this device. The Linn Kudos FM/AM/LW tuner also uses a TDA1572 in its final I.F. strip. Yes, that Linn tuner is dual conversion on the AM/LW band.
Eventually, I decided to include the 1st and 2nd mixers, the I.F. strip, the SSB detector, and the audio amp on the same PCB.
I got my PC layout experience as a PCB designer for my first couple of years at Rockwell-Collins; henceforth, I learned what it takes to produce a good board design.
Anyway, take a look at that website; I have uploaded PDFs of the schematics, board layouts, specifications, and parts placements. On a final note.....the MDS of the receiver is between 35 and 45nV across the tuning range, depending on the band, and that is with no RF amplification ahead of the 1st mixer. The IP3 is +14dBm, which isn't too bad.
You can break down this circuit into different modules, and it will work fine. I already have it broken down into these modules as it stands: Power Supply, DDS, Preselector, and Main Board.

Pete

Richard <nearlynews_email@ntlworld.com> wrote in message
news:bbbd1m$7lbii$1@ID-150848.news.dfncis.de...
>
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> >
> > Consider a simple mixer. You might have an active mixer, a passive
> mixer or
> > a Tayloe mixer. You can't drop a Tayloe mixer in where an active
> mixer used
> > to be, because the Tayloe mixer needs a quadrature LO. And the
> passive
> > mixer won't drop in because it needs higher levels of input and LO.
> Of
> > course, there are also an unlimited number of IF and input frequency

> > possibilities, all of which affect the design. One of the main
> differences
> > between various receiver designs is the distribution of gain
> throughout the
> > receiver. Guess what, that affects every stage. Were you to come up
> with a
> > generic mixer module, it might work in one in a million designs. You
> might
> > get a little better hit rate with front ends, and there are lots of
> VFOs out
> > there because the VFO has no inputs and only one output, so the hit
> rate
> > tends to be a little better. Same with audio stages which have only
> one or
> > two inputs (audio and mute). But for the rest of the stages, trying
> to make
> > something generic is somewhat of a loosing proposition.
>
>
> Understood.
>
> I guess it's more realistic just to expect a modular approach to a
> particular overall RX or TX design. In the sense of the modular parts
> build on seperate PCB's.
>
> For the RX I was thinking of "typical" modules for a superhet. That
> would mean active mixer, but the gain distribution issue is important.
>

3868. Re: Can you buy seperately ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 19:06:03 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <v8sCa.182560$ja4.9520672@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35070

Nice job on that mixer moduler, Leon!

Pete

Leon Heller <leon_heller@hotmail.com> wrote in message
news:bb5m7g$t1i$1@titan.btinternet.com...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:bb58rv$5r2nc$1@ID-150848.news.dfncis.de...
> > ...IF amplifiers or Front Ends? Like, PCB's plus the bits
>
> I've got a DC Rx mixer module design on my web site, with a PCB design.
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>

3869. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-01 23:17:50 UTC
From: la8ak.xnd@online.no
Message-ID: <3eda51ad.80237309@news.online.no>
Source record: 35071

On Fri, 30 May 2003 15:45:57 GMT, Dale Parfitt <parinc@gte.net> wrote:

>
>As important as designing a surface is, it is equally important to select an F/D
>that can be illuminated by a real world feed.
>
>Dale W4OP
>
and at the same time - stable enough in the wind

Is it some description of the offset fed dish ? You save a lot using
discarded SATTV dishes and even a 6cm dish could be reasonably sized

73
LA8AK
http://home.online.no/~la8ak/

USA has the best democracy money can buy!

remove "postage" to reply

3870. Re: Are you tellimg me ! / Re: FREE test equipment to good home, Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 00:52:46 UTC
From: Michael Culley <mculleyNOSPAM@optushome.com.au>
Message-ID: <bbe77c$8ll45$1@ID-180780.news.dfncis.de>
Source record: 35072
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.design

> Do you morons know how to post to the intended group and not cross
> post to groups that have no interested in anything you have on
> your tiny brains? Take the rec.antiques.radio+phono group out of
> your posting, no one there cares about your silly rantings.

Someone who continues to read a thread they have no interest in and then complains that someone posted to the thread is the moron.

--
Michael Culley

3871. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 06:10:53 UTC
From: yukio <yano@shaw.ca>
Message-ID: <NTBCa.112729$ro6.3306388@news2.calgary.shaw.ca>
Source record: 35073

<c.a.m@antispam.blueyonder.co.uk> wrote in message
news:0kfucv8ol3nrg9doaued7vk3g90frm1iaa@4ax.com...
>
> Hi.
>
> Does anyone know the formula for drawing out a single petal for parabolic
dish
> at all ?
>
> Clive
> I once used a formula from the "Amateur scientist" column in Scientific
American published in the late sixties or early seventies, the cover with a
microphone in a bird nest !!.

NB. I tried to set it up on a programmable desk calculator but never got it
to work !! until I changed a SIGN in the formula given in the article. I
think it was a "+" and the required was "-" I looked for corrections
for the article for months but never found a correction. I know I ran many
passes to confirm the patch and it agreed with the author's example only if
I changed a sign. .

Yukio Yano
VE5YS

3872. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 09:57:19 UTC
From: Michael <not@on.your.life>
Message-ID: <3cFCa.115441$ro6.3339170@news2.calgary.shaw.ca>
Source record: 35074

Results 1 - 10 of about 1,010,000. Search took 0.24 seconds (Google on 455
IF)
First hit returned: http://www.ai.com/receivers/ra02083.htm
I don't have a problem with finding things.

Michael VE7YXX
(look me up on QRZ.COM if you need to email me)

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bbb61e$7rf3g$1@ID-150848.news.dfncis.de...
> Harold E. Johnson wrote:
> > Whoever started this thread is having a search engine problem. If
> > you'll correct that, you will have no problem finding yourself
...
> Look at how many hits show 455 Khz IF circuits or construction articles.
> Very few. You have to really search. This may be because there are not

3873. Pointer to Digital Scope FAQ

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 10:30:51 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-AAB4E3.06305102062003@netnews.attbi.com>
Source record: 35075

http://www.qsl.net/wd1v/scopefaq/index.html

3874. Grid dip meter info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 12:44:06 UTC
From: Jim Simmons <jimsim@adelphia.net>
Message-ID: <qEHCa.1855$xM5.1659311@news2.news.adelphia.net>
Source record: 35076

Does anyone out there have any coils for a Heathkit GD they would like to sale or give away? If not, could anyone furnish the core used to wind them on (length & diameter). I also need I also need the size of the wire used to make the plugs.

Your help will be appreciated!

Thanks!

Jim, kf4tun

3875. Re: Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 13:50:15 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3EDB55BF.ED8A889@earthlink.net>
Source record: 35078

ga_boneyard wrote:
>
> Well, Most of the ham-type shops will be at the hamvention.
>
> Surplus Electronics:
>
> My favorite is Midwest Surplus Electronics on Main St in Fairborn, OH --
> just outside Wright Patterson AFB.
>
> Also, Mendelsohn is downtown on 2nd St (?).
>
> And, you will be just down the road (approx 70 miles) from Fair Radio in
> Lima, OH..
>
> What did I miss?
>
> Larry Keith
> KQ4BY
>
> "John Mortlock" <heads@global.freeserve.co.uk> wrote in message
> news:b962tn$5d6$1@news8.svr.pol.co.uk...
> > While visiting Dayton are there any Ham shops or Surplus electronics
> outlets
> > nearby ?
> >
> > Thanks,
> > John G3UGY
> >
> >

Is Mike Byrd still in the surplus business over Byrd's Coin Shop in
Dayton? I think it was called A1 Surplus. It was between an adult
bookstore, and a Christian Science Reading room, and every time I went
to see Mike, the cops were around the corner taking down license plate
numbers. they were rather upset when you parked, walked right past the
adult bookstore, and went into the coin shop or up the stairs to the
second floor.
--

Michael A. Terrell
Central Florida

3876. G3DXZ's Huff and Puff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 15:01:30 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3EDB66CA.B920F603@neicoltech.org>
Source record: 35079

Hi gang,
In one of the RSGB's Technical Notes compendiums, there is a simplified version of PA0KSB's Huff & Puff oscillator stabilizer. The schematic shows a HC4060 counter chip with 2 outputs feeding an integrator. One of them is labeled pin 3 the other is blank. Also, the text below the schematic states Q11 and 13 are the outputs used from the 4060, but pin 3 is not one is these......so I have nothing but questions... ;) Does anyone have a complete and accurate schematic for this circuit?

Thanks
Bob L. WB0POQ

3877. HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 17:34:54 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bbg1rtbpt1@titan.btinternet.com>
Source record: 35080

I've just designed a simple HF mixer module PCB:

http://www.geocities.com/leon_heller/mixer.html

I'll be designing an IF amplifier module to go with it, which could be
followed by
my direct conversion Rx module as a high-performance product detector.

All modules are 2" square.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3878. Re: G3DXZ's Huff and Puff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 17:43:10 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bbg2be$5oh$1@sparta.btinternet.com>
Source record: 35081

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3EDB66CA.B920F603@neicoltech.org...
> Hi gang,
> In one of the RSGB's Technical Notes compendiums, there is a
> simplified version of PA0KSB's Huff & Puff oscillator stabilizer. The
> schematic shows a HC4060 counter chip with 2 outputs feeding an
> integrator. One of them is labeled pin 3 the other is blank.
> Also, the text below the schematic states Q11 and 13 are the outputs
> used from the 4060, but pin 3 is not one is these......so I have nothing
> but questions... ;) Does anyone have a complete and accurate
> schematic for this circuit?

They probably had a correction in the magazine issue after the original
schematic was published. Perhaps you can get hold of the issue.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3879. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 17:51:02 UTC
From: donut <none@none.com>
Message-ID: <Xns938E6D2FEED31donut@216.102.43.227>
Source record: 35082

"Leon Heller" <leon_heller@hotmail.com> wrote in
news:bbg1rtbpt1@titan.btinternet.com:

> I've just designed a simple HF mixer module PCB:
>
> http://www.geocities.com/leon_heller/mixer.html
>
> I'll be designing an IF amplifier module to go with it, which could be
> followed by
> my direct conversion Rx module as a high-performance product detector.
>
> All modules are 2" square.
>
> 73, Leon

Please keep us updated. I am quite interested in building a receiver based
on your modules.

3880. Re: Parabolic Dish Petal Formula

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 20:48:24 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <vdne0o3bq67h66@corp.supernews.com>
Source record: 35083

Ahhh - the advantages of having the entire series on CD-ROM. The article on how to make such paraboloids in in the December 1973 issue with a correction in the February 1974 issue. The formula isn't given as far as I see per se, but a spreadsheet approach is.

If you can't find it, let me know and I'll figure out what the formula is that he used.

Jim Horn, WB9SYN

3881. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 21:54:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbggu2$8afcu$1@ID-150848.news.dfncis.de>
Source record: 35084

Michael wrote:
> Results 1 - 10 of about 1,010,000. Search took 0.24 seconds (Google
> on 455 IF)
> First hit returned: http://www.ai.com/receivers/ra02083.htm
> I don't have a problem with finding things.
>

Hehe, yes, but I from that search find 10, 455 Khz IF amp circuits.

3882. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 22:07:32 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbghmq$9dl22$1@ID-150848.news.dfncis.de>
Source record: 35085

Leon Heller wrote:
> I've just designed a simple HF mixer module PCB:
>
> http://www.geocities.com/leon_heller/mixer.html
>
> I'll be designing an IF amplifier module to go with it, which could be
> followed by
> my direct conversion Rx module as a high-performance product detector.
>
> All modules are 2" square.
>
> 73, Leon

Excellent.

I am a "module person".

Seems to make building simpler, because each board is relatively simpler
than a board with everything on it. And you can experiment easier.

Will watch developments with interest.

I'm particularly interested in a high quality IF amp using xtal filters.
I don't even mind bulding three IF's one for AM, one for SSB, the other
for CW. Although not strictly necessary to go that way. :c)

3883. Repeaters available

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 22:32:55 UTC
From: plaaaaneREMOVETHIS@yahoo.com
Message-ID: <3eddcf9c.2370458@news.aaahawk.com>
Source record: 35086

FYI On the www.govdeals.com web site - category communications equipment there are VHF & UHF repeaters for sale for $100. Also oscilloscopes for $40 each.

3884. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 23:02:20 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <0IQCa.208$d51.45842@sccrnsc01>
Source record: 35087

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bbggu2$8afcu$1@ID-150848.news.dfncis.de...
> Michael wrote:
> > Results 1 - 10 of about 1,010,000. Search took 0.24 seconds (Google
> > on 455 IF)
> > First hit returned: http://www.ai.com/receivers/ra02083.htm
> > I don't have a problem with finding things.
> >
>
> Hehe, yes, but I from that search find 10, 455 Khz IF amp circuits.

good grief. how many do you need?

W4ZCB

3885. Re: Call to RX designers (ie somone)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 23:35:27 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbgmrd$9bsfb$1@ID-150848.news.dfncis.de>
Source record: 35088

Harold E. Johnson wrote:
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:bbggu2$8afcu$1@ID-150848.news.dfncis.de...
>> Michael wrote:
>> > Results 1 - 10 of about 1,010,000. Search took 0.24 seconds (Google
>> > on 455 IF)
>> > First hit returned: http://www.ai.com/receivers/ra02083.htm
>> > I don't have a problem with finding things.
>> >
>>
>> Hehe, yes, but I from that search find 10, 455 Khz IF amp circuits.
>
> good grief. how many do you need?
>
> W4ZCB

I'm not saying I need 10, but I might want to look at 10 and make a
choice.

3886. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-02 23:40:56 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbgn6b$9c1bm$1@ID-150848.news.dfncis.de>
Source record: 35089

Leon Heller wrote:
> I've just designed a simple HF mixer module PCB:
>
> http://www.geocities.com/leon_heller/mixer.html
>
> I'll be designing an IF amplifier module to go with it, which could be
> followed by
> my direct conversion Rx module as a high-performance product detector.
>
> All modules are 2" square.
>
> 73, Leon

If anyone reading this thread has module designs, esp with PCB layout,
or is willing to modularise their RX or TX designs, that would be just
great. IMHO.

3887. MOD surplus id.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 00:44:26 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1054684477.876342@auth2.dns.griffin.net.uk>
Source record: 34957

does anyone know of a site dealing with ex mod radio gear/parts so that i can identify some pa modules i have????

thanks g0zen

3888. home brew website

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 03:29:21 UTC
From: "..." <"fundraiser2002 /hotmail.com">
Message-ID: <3edc1733$0$17054$afc38c87@news.optusnet.com.au>
Source record: 35090

I'm selling a homebrew website heres the link,

http://cgi.ebay.com.au/ws/eBayISAPI.dll?ViewItem&item=2534370749&category=2992

I also build sites for People if interested.

3889. Re: home brew website

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 06:41:00 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3edc4502_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 35091

Someone else who has misunderstood what this group's about!

"..." <fundraiser2002 /hotmail.com> wrote in message
news:3edc1733$0$17054$afc38c87@news.optusnet.com.au...
> I'm selling a homebrew website heres the link,
>
>
http://cgi.ebay.com.au/ws/eBayISAPI.dll?ViewItem&item=2534370749&category=29
92
>
> I also build sites for People if interested.
>
>

3890. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 07:53:42 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <auYCa.108507$cO3.7849220@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35092

You can use PIN diode swithing for the filters.....it works out pretty
well.

Pete

Richard <nearlynews_email@ntlworld.com> wrote in message
news:bbghmq$9dl22$1@ID-150848.news.dfncis.de...
> Leon Heller wrote:
> > I've just designed a simple HF mixer module PCB:
> >
> > http://www.geocities.com/leon_heller/mixer.html
> >
> > I'll be designing an IF amplifier module to go with it, which could be
> > followed by
> > my direct conversion Rx module as a high-performance product detector.
> >
> > All modules are 2" square.
> >
> > 73, Leon
>
> Excellent.
>
> I am a "module person".
>
> Seems to make building simpler, because each board is relatively simpler
> than a board with everything on it. And you can experiment easier.
>
> Will watch developments with interest.
>
> I'm particularly interested in a high quality IF amp using xtal filters.
> I don't even mind bulding three IF's one for AM, one for SSB, the other
> for CW. Although not strictly necessary to go that way. :c)
>

3891. Re: Grid dip meter info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 13:41:52 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vdp9db1o86r7aa@corp.supernews.com>
Source record: 35093

there's at least 5 models, which one you have should be inidcated!
"Jim Simmons" <jimsim@adelphia.net> wrote in message
news:qEHCa.1855$xM5.1659311@news2.news.adelphia.net...
Does anyone out there have any coils for a Heathkit GD they would like to sale or give away? If not, could anyone furnish the core used to wind them on (length & diameter). I also need I also need the size of the wire used to make the plugs.

Your help will be appreciated!

Thanks!

Jim, kf4tun

3892. Re: Grid dip meter info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 15:01:16 UTC
From: Jim Simmons <jimsim@adelphia.net>
Message-ID: <0L2Da.2062$xM5.1940343@news2.news.adelphia.net>
Source record: 35094

I should given this before. It's an oldie, Heathkit GD-1A.

Jim, kf4tun
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:vdp9db1o86r7aa@corp.supernews.com...
there's at least 5 models, which one you have should be inidcated!
"Jim Simmons" <jimsim@adelphia.net> wrote in message
news:qEHCa.1855$xM5.1659311@news2.news.adelphia.net...
Does anyone out there have any coils for a Heathkit GD they would like to sale or give away? If not, could anyone furnish the core used to wind them on (length & diameter). I also need I also need the size of the wire used to make the plugs.

Your help will be appreciated!

Thanks!

Jim, kf4tun

3893. how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 15:59:55 UTC
From: sw@ai.mit.edu
Message-ID: <3ba51ab6.0306030759.53742409@posting.google.com>
Source record: 35095

Hi Gang --

I am wondering what the passband characteristics of a BC453
are if the transformers are set for max selectivity
(loosest coupling, no stagger). How nice is that as a
CW filter?

73, NS1W

3894. need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 16:21:30 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EDCCB0A.40205@hotmail.com>
Source record: 35096

I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?

Someone sugested that the CPU supply voltage might be the problem, I measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V or 6V but not between. I need to know what the needed VCC for the chip is so I know if I have to replace a regulator somewhere or add a zener or if I'm on the wrong track.

Alex
VE3LEG

3895. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 18:10:27 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bbioajjju1@titan.btinternet.com>
Source record: 34948

"Alex" <ve3leg@hotmail.com> wrote in message
news:3EDCCB0A.40205@hotmail.com...
> I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
> CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
>
>
> Someone sugested that the CPU supply voltage might be the problem, I
> measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
> or 6V but not between. I need to know what the needed VCC for the chip
> is so I know if I have to replace a regulator somewhere or add a zener
> or if I'm on the wrong track.

Regulators typically have a 5% or so tolerance on the output voltage, so it
might be OK for a nominal 5V supply.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3896. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 18:48:08 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000000a.005c58a2@btinternet.com>
Source record: 34949

Hi,

> I am wondering what the passband characteristics of a BC453
> are if the transformers are set for max selectivity
> (loosest coupling, no stagger). How nice is that as a
> CW filter?
>
> 73, NS1W

Out of curiosity I went alooking.

The SCR-274N manual wasn't too helpful, saying only that the voice response of the BC-453 is well down at 1,500 hertz. However, Byron Goodman's (W1DX) one-page article in QST for January 1948, "The Lazy Man's Q5-er", shows a graph of the receiver's overall response with the variable I.F. coupling set to minimum. Surprisingly it is not as good as I would have thought with a 6dB bandwidth of 2kHz and shape factor of 3.25 (6/60dB).

Cheers - Joe, G3LLV

3897. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 18:51:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vdpri04t0t0bfa@corp.supernews.com>
Source record: 34950

Nearly all 5 volt ICs also have a 5% tolerance on the DC supply voltage. So 5.17 volts is normal and almost certainly well within specifications for the IC. I think it's very unlikely that the 5 volt supply is the problem -- you're on the wrong track.

Roy Lewallen, W7EL

Leon Heller wrote:
> "Alex" <ve3leg@hotmail.com> wrote in message
> news:3EDCCB0A.40205@hotmail.com...
>
>>I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
>>CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
>>
>>
>>Someone sugested that the CPU supply voltage might be the problem, I
>>measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
>>or 6V but not between. I need to know what the needed VCC for the chip
>>is so I know if I have to replace a regulator somewhere or add a zener
>>or if I'm on the wrong track.
>
>
> Regulators typically have a 5% or so tolerance on the output voltage, so it
> might be OK for a nominal 5V supply.
>
> 73, Leon

3898. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 19:20:32 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bbis9h$9vu06$1@ID-150848.news.dfncis.de>
Source record: 34951

"Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
news:auYCa.108507$cO3.7849220@bgtnsc04-news.ops.worldnet.att.net...
> You can use PIN diode swithing for the filters.....it works out
pretty
> well.
>
> Pete

I like the idea of small relays.

3899. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 19:43:04 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <bbito8$34g$1@freenet9.carleton.ca>
Source record: 34952

Joe McElvenney (ximac@btinternet.com) writes:
> Hi,
>
>> I am wondering what the passband characteristics of a BC453
>> are if the transformers are set for max selectivity
>> (loosest coupling, no stagger). How nice is that as a
>> CW filter?
>>
>> 73, NS1W
>
> Out of curiosity I went alooking.
>
> The SCR-274N manual wasn't too helpful, saying only that
> the voice response of the BC-453 is well down at 1,500 hertz.
> However, Byron Goodman's (W1DX) one-page article in QST for
> January 1948, "The Lazy Man's Q5-er", shows a graph of the
> receiver's overall response with the variable I.F. coupling
> set to minimum. Surprisingly it is not as good as I would
> have thought with a 6dB bandwidth of 2kHz and shape factor of
> 3.25 (6/60dB).
>
>
> Cheers - Joe, G3LLV
>
>
>
That does seem less than was implied all these years.

But, of course we are talking about 55 years ago. The whole point was to get better selectivity, but connecting the receiver to the 455KHz IF of your regular receiver. Likely the average receiver at the time did not have such great selectivity, so by adding the Q5-er one ended up with better results. It's all relative. Nowadays, people wouldn't bother because there are better ways of getting selectivity, so how many have gone back and looked at the actual specs? It worked then, and that was all that matters.

Michael VE2BVW

3900. Looking for an inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 19:58:09 UTC
From: dark_fiber_2000@yahoo.com
Message-ID: <8a0deead.0306031158.1b86e115@posting.google.com>
Source record: 34953

Any advice on where to purchase parts - looking for a 0.27 mh/24 GA steel core inductor. Not having much luck finding a dealer on the web. Any suggestions would be appreciated.

Thanks.

3901. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 20:14:45 UTC
From: donut <none@none.com>
Message-ID: <Xns938F858B02F04donut@216.102.43.227>
Source record: 34954

et472@FreeNet.Carleton.CA (Michael Black) wrote in
news:bbito8$34g$1@freenet9.carleton.ca:

> Joe McElvenney (ximac@btinternet.com) writes:
>> Hi,
>>
>>> I am wondering what the passband characteristics of a BC453
>>> are if the transformers are set for max selectivity
>>> (loosest coupling, no stagger). How nice is that as a
>>> CW filter?
>>>
>>> 73, NS1W
>>
>> Out of curiosity I went alooking.
>>
>> The SCR-274N manual wasn't too helpful, saying only that
>> the voice response of the BC-453 is well down at 1,500 hertz.
>> However, Byron Goodman's (W1DX) one-page article in QST for
>> January 1948, "The Lazy Man's Q5-er", shows a graph of the
>> receiver's overall response with the variable I.F. coupling
>> set to minimum. Surprisingly it is not as good as I would
>> have thought with a 6dB bandwidth of 2kHz and shape factor of
>> 3.25 (6/60dB).
>>
>>
>> Cheers - Joe, G3LLV
>>
>>
>>
> That does seem less than was implied all these years.
>
> But, of course we are talking about 55 years ago. The whole
> point was to get better selectivity, but connecting the receiver
> to the 455KHz IF of your regular receiver. Likely the average
> receiver at the time did not have such great selectivity, so by
> adding the Q5-er one ended up with better results. It's all
> relative. Nowadays, people wouldn't bother because there are
> better ways of getting selectivity, so how many have gone back
> and looked at the actual specs? It worked then, and that was
> all that matters.
>
> Michael VE2BVW
>
>

Put a surplus 455 kHz Collins filter in. But, I guess if you had one, you wouldn't need the BC-453...

3902. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 20:44:02 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000000d.00c67493@btinternet.com>
Source record: 34955

Hi,

IMHO, the simplest (and one of the best) CW filters is still the single crystal one by Lamb dating from the 30's, that was almost a standard fit to boat-anchor receivers up to the 60's. And, with the very low cost of computer clock-rocks today, it shouldn't be too difficult to implement; complete with its distinctive ringing sound (with a high-enough Q crystal) and the free notch thrown in.

I am currently using a series 198kHz crystal filter in a frequency standard receiver but, as I have no need to neutralise the parallel resonant notch, I didn't have to modify any I.F. transformers to feed it. On page 16.18 of the 2000 Handbook, they show a bifilar wound feed instead that should be easy to make up.

73 de Joe, G3LLV

3903. Re: home brew website

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 22:09:36 UTC
From: js35 <28@47219.com>
Message-ID: <VFgDa.154$tV.21@newsfep1-gui.server.ntli.net>
Source record: 34960

He'll be selling a copy of your email next!

"Hugh Colborn" <dontspamstockden@tiscali.co.uk> wrote in message
news:3edc4502_1@mk-nntp-2.news.uk.tiscali.com...
> Someone else who has misunderstood what this group's about!
>
> "..." <fundraiser2002 /hotmail.com> wrote in message
> news:3edc1733$0$17054$afc38c87@news.optusnet.com.au...
> > I'm selling a homebrew website heres the link,
> >
> >
>
http://cgi.ebay.com.au/ws/eBayISAPI.dll?ViewItem&item=2534370749&category=29
> 92
> >
> > I also build sites for People if interested.
> >
> >
>
>

3904. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-03 23:18:25 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EDD2CC1.9090204@hotmail.com>
Source record: 34956

OK, let's see if someone can suggest a right track.

The radio turns on, the squelch works, the speaker outputs static. That much works.

The LED display only turns on approx 30% of the time. When it does I can change frequency with the up/down ocntrol on the mic. When I try to key in a new frequency on the front panel about half the time the radio just dies, the other half it changes freq. Problem is the 2,5,8,+,- keys don't work either. When the radio turns on properly and the frequency changes without the radio dying I can hear the outside world. I haven't dared to try and transmit on it, who knows what might happen.

If any of these symptoms sound familiar to anyone who has a Kenwood TR-7800, please let me know.

Alex
VE3LEG

Roy Lewallen wrote:
> Nearly all 5 volt ICs also have a 5% tolerance on the DC supply voltage.
> So 5.17 volts is normal and almost certainly well within specifications
> for the IC. I think it's very unlikely that the 5 volt supply is the
> problem -- you're on the wrong track.
>
> Roy Lewallen, W7EL
>
> Leon Heller wrote:
>
>> "Alex" <ve3leg@hotmail.com> wrote in message
>> news:3EDCCB0A.40205@hotmail.com...
>>
>>> I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
>>> CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
>>>
>>>
>>> Someone sugested that the CPU supply voltage might be the problem, I
>>> measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
>>> or 6V but not between. I need to know what the needed VCC for the chip
>>> is so I know if I have to replace a regulator somewhere or add a zener
>>> or if I'm on the wrong track.
>>
>>
>>
>> Regulators typically have a 5% or so tolerance on the output voltage,
>> so it

>> might be OK for a nominal 5V supply.
>>
>> 73, Leon
>
>

3905. Re: Looking for an inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 03:24:31 UTC
From: k7itm@aol.com
Message-ID: <3200347.0306031924.10d191a1@posting.google.com>
Source record: 34958

dark_fiber_2000@yahoo.com (SlackDaddy) wrote in message
news:<8a0deead.0306031158.1b86e115@posting.google.com>...
> Any advice on where to purchase parts - looking for a 0.27 mh/24 GA
> steel core inductor. Not having much luck finding a dealer on the
> web. Any suggestions would be appreciated.

Steel core? Seems like a very low inductance for a steel-core
(iron-core) part. What freq range? Uncommon for steel to be used
much above audio freqs. Shouldn't be too much trouble to wind one on
a ferrite or powdered iron core. And I would guess DigiKey and Mouser
would both have things in that range (270uH). Both have on-line
ordering. To find one to buy, you'd usually specify the max current
rather than the wire gauge. Max current can depend on the wire or on
core saturation.

Cheers,
Tom

3906. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 05:30:26 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0306032130.52311e7f@posting.google.com>
Source record: 34959

Alex <ve3leg@hotmail.com> wrote in message news:<3EDD2CC1.9090204@hotmail.com>...
> OK, let's see if someone can suggest a right track.
>
> The radio turns on, the squelch works, the speaker outputs static. That
> much works.
>
> The LED display only turns on approx 30% of the time. When it does I can
> change frequency with the up/down ocntrol on the mic. When I try to key
> in a new frequency on the front panel about half the time the radio just
> dies, the other half it changes freq. Problem is the 2,5,8,+,- keys
> don't work either. When the radio turns on properly and the frequency
> changes without the radio dying I can hear the outside world. I haven't
> dared to try and transmit on it, who knows what might happen.
>
> If any of these symptoms sound familiar to anyone who has a Kenwood
> TR-7800, please let me know.
>
>
> Alex
> VE3LEG
>

OK, its time for some systematic fault finding. Do you have a service manual for the thing - if not, get one, or at least a schematic. As mentioned before, the Vcc for the micro is probably OK - if you want to be fussy, stick your CRO on the line and see what the ripple/noise is (proably not much).

The led turns on for 30% of the time and the radio works - when it doesnt turn on, try poking/tapping/stressing the baords to check for a loose connecton. Try heating and cooling - a domestic hairdryer for both functions works well.

If this doesnt localise the fault, check the cpu xtal is oscillating. Check all pin voltages, you should be able to work out approx. from the schematic - in particualr, check data in/out lines ie as you toggle the up/down buttons.

At the moment, this is all I can suggest - if you can hold it up in front of your monitor so I can see it I will try a bit harder hi hi...

Good luck, its a great feeling when you crack a hard one - and BTW, micros very seldom fail....

Regards,
Andrew VK3BFA

It sounds like the keypad is faulty as well - take it out of circuit
to avoid compunding your problems, if the up/down buttons work then
you dont need it at this stage and you can treat it as a separate
fault later.
> Roy Lewallen wrote:
> > Nearly all 5 volt ICs also have a 5% tolerance on the DC supply voltage.
> > So 5.17 volts is normal and almost certainly well within specifications
> > for the IC. I think it's very unlikely that the 5 volt supply is the
> > problem -- you're on the wrong track.
> >
> > Roy Lewallen, W7EL
> >
> > Leon Heller wrote:
> >
> >> "Alex" <ve3leg@hotmail.com> wrote in message
> >> news:3EDCCB0A.40205@hotmail.com...
> >>
> >>> I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
> >>> CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
> >>>
> >>>
> >>> Someone sugested that the CPU supply voltage might be the problem, I
> >>> measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
> >>> or 6V but not between. I need to know what the needed VCC for the chip
> >>> is so I know if I have to replace a regulator somewhere or add a zener
> >>> or if I'm on the wrong track.
> >>
> >>
> >>
> >> Regulators typically have a 5% or so tolerance on the output voltage,
> >> so it
> >> might be OK for a nominal 5V supply.
> >>
> >> 73, Leon
> >
> >

3907. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 08:08:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vdra8u4ee3f3cc@corp.supernews.com>
Source record: 34961

Andrew VK3BFA wrote:
> . . .
> The led turns on for 30% of the time and the radio works - when it
> doesnt turn on, try poking/tapping/stressing the baords to check for a
> loose connecton. Try heating and cooling - a domestic hairdryer for
> both functions works well.
> . . .

A much more effective way of cooling is a can of spray cooler, available from just about any electronics store. If you can't find any, get a product in a pressurized can sold as a compressed "air" duster. It's essentially the same stuff (similar to Freon, but now allegedly without the ozone-depleting properties), but without a siphon tube -- spray with it upside down to make the liquid come out. You can get this at computer and office supply stores.

The shock of the sudden cooling reveals a variety of problems, so spray cooler is very often the first thing a technician reaches for in order to track down an intermittent problem.

Roy Lewallen, W7EL

3908. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 08:34:42 UTC
From: mark@NOSPAMmarktitterington.com
Message-ID: <3eddadeb.129357115@news.prodigy.net>
Source record: 34962

I'll bet your problem is not with the micro or the 5v that feeds it.

90% of problems in older radios of that vintage are with sockets/connectors/wiring. As it was stated, poke around... gently the boards. If the micro is in a socket, carefully let me repeat... CAREFULLY remove it and clean the pins with a pencil eraser. They will be very brittle, so you need to go slow. Same proceedure for connector pins. As someone else could also be the keyboard, especially tricky if the problem is a key or two that gets stuck and cause the code in the micro to do funny things on start-up.

Go slow, it's not rocket-science. I know very often we tend to jump into the worst possible scenario but the problem is usually something very, very simple. Let us know what you find.

73,

Mark W1EOF

3909. Money from home to you

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 14:54:21 UTC
From: "Jimmy D. Sanders" <fsanders@swfla.rr.com>
Message-ID: <3ede081d@shknews01>
Source record: 34963

Hello, My name is JD Sanders,

I am writing to see if you sre open to taking a look at a winning opportunity.
if so please go to
jdsanders.plugandplay.com
nitropowerline.com/jdsanders

Thank you and take car
JD Sanders
239-370-3268

3910. Info/Datasheet for Kenwood/Trio TA-100WA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 16:14:38 UTC
From: kb5zvp@arrl.net
Message-ID: <5776ba24.0306040814.39645726@posting.google.com>
Source record: 34965

Hey folks!

I have come accross a stash of Trio (Kenwood) TA-100WA, TA-200WA, and TA-80WA. They are marked "Pure Complementary Power Amplifier".

They were given to a friend, and he was under the impression they were audio amplifiers...?

Does anyone know a source of information and/or datasheets for these parts? I have quite a few of them, and would like to put them to use!

Thanks for your help!

73 de KB5ZVP (Scott)

ps - If I'm slow to respond, please email me KB5ZVP@arrl.net. I'm not a regular user of NNTP, so sometimes I forget!

3911. WTB/T ARC 5 DM-7 Modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 18:04:58 UTC
From: Sparks <sparksw4eas@mindspring.com>
Message-ID: <3EDE34CA.65CB@mindspring.com>
Source record: 34964

Need a ARC DM-7 Modulator or at least the transformer from one. Thanks
Sparks W4EAS

3912. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 18:26:30 UTC
From: sw@ai.mit.edu
Message-ID: <3ba51ab6.0306041026.4349364d@posting.google.com>
Source record: 34966

donut <none@none.com> wrote in message news:<Xns938F858B02F04donut@216.102.43.227>...
> et472@FreeNet.Carleton.CA (Michael Black) wrote in
> news:bbito8$34g$1@freenet9.carleton.ca:
>
> > Joe McElvenney (ximac@btinternet.com) writes:
> >> Hi,
> >>
> >>> I am wondering what the passband characteristics of a BC453
> >>> are if the transformers are set for max selectivity
> >>> (loosest coupling, no stagger). How nice is that as a
> >>> CW filter?
> >>>
> >>> 73, NS1W
> >>
> >> Out of curiosity I went alooking.
> >>
> >> The SCR-274N manual wasn't too helpful, saying only that
> >> the voice response of the BC-453 is well down at 1,500 hertz.
> >> However, Byron Goodman's (W1DX) one-page article in QST for
> >> January 1948, "The Lazy Man's Q5-er", shows a graph of the
> >> receiver's overall response with the variable I.F. coupling
> >> set to minimum. Surprisingly it is not as good as I would
> >> have thought with a 6dB bandwidth of 2kHz and shape factor of
> >> 3.25 (6/60dB).
> >>
> >>
> >> Cheers - Joe, G3LLV
> >>
> >>
> >>
> > That does seem less than was implied all these years.
> >
> > But, of course we are talking about 55 years ago. The whole
> > point was to get better selectivity, but connecting the receiver
> > to the 455KHz IF of your regular receiver. Likely the average
> > receiver at the time did not have such great selectivity, so by
> > adding the Q5-er one ended up with better results. It's all
> > relative. Nowadays, people wouldn't bother because there are
> > better ways of getting selectivity, so how many have gone back
> > and looked at the actual specs? It worked then, and that was
> > all that matters.
> >
> > Michael VE2BVW
> >

> >
>
> Put a surplus 455 kHz Collins filter in. But, I guess if you had one, you
> wouldn't need the BC-453...

I didn't have the '48 QST, and I've been curious, it got
a lot of recommentations in the 50's and 60's QSTs.

I'm embarrased to admit that I was thinking of using a BC453 as a way to
get RIT and cw filtering on my KWM-2...

3913. FA: EBAY HAM STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 18:36:03 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <n_qDa.110253$cO3.8003569@bgtnsc04-news.ops.worldnet.att.net>
Source record: 34967

Have listed CP Clark relay coils, turns counters, 811A tubes, Ant change over relay at 115v,Vac Relay RF-1E, PCI oil caps,.. more stuff coming. See under seller : heytubeguy

3914. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 21:10:10 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bblqnqpki1@bob.news.rcn.net>
Source record: 35019

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:JYtDa.3584$tV.2582@newsfep1-gui.server.ntli.net...
> Hi guys,
> Does anyone know where on the web I can find
> a minimal component schematic to build a PLL
> or DDS synthesiser which will give me a clean 1 to 30MHz signal?
> Any assistance will be greatly appreciated.

There are lots of circuits on the Web using the Analog Devices 9850 DDS chip, for example

http://www.geocities.com/SiliconValley/Code/1835/dds.html

The Analog Devices data sheet gives a very minimal circuit. Layout is surely critical to getting a clean output.

Bob C w3otc

3915. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 21:19:48 UTC
From: Tweetldee <dgmason99@att99.net>
Message-ID: <UntDa.110399$cO3.8014064@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35017

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:vdra8u4ee3f3cc@corp.supernews.com...
> Andrew VK3BFA wrote:
> > . . .
> > The led turns on for 30% of the time and the radio works - when it
> > doesnt turn on, try poking/tapping/stressing the baords to check for a
> > loose connecton. Try heating and cooling - a domestic hairdryer for
> > both functions works well.
> > . . .
>
> A much more effective way of cooling is a can of spray cooler, available
> from just about any electronics store. If you can't find any, get a
> product in a pressurized can sold as a compressed "air" duster. It's
> essentially the same stuff (similar to Freon, but now allegedly without
> the ozone-depleting properties), but without a siphon tube -- spray with
> it upside down to make the liquid come out. You can get this at computer
> and office supply stores.
>
> The shock of the sudden cooling reveals a variety of problems, so spray
> cooler is very often the first thing a technician reaches for in order
> to track down an intermittent problem.
>
> Roy Lewallen, W7EL
>

Cooling spray is also one of the most misused aids in the hands of an
untrained or inexperienced technician. I've seen techs waste half a can of
the spray on a circuit trying to make something fail, because they didn't
have the knowledge or training necessary to do proper troubleshooting.
The proper way to use it is to spray a quick burst of the coolant onto
specific components that are under suspicion. You don't normally flood an
entire circuit with the stuff, to the point of having the whole assembly
encased in a block of ice. Use it sparingly, along with a good measure of
intelligent troubleshooting. A can will last a lot longer that way, and it
will have served you better.
--
Tweetldee
Tweetldee at att dot net (Just subsitute the appropriate characters in the
address)

Time is what keeps everything from happening all at once.

3916. Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 21:59:05 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <JYtDa.3584$tV.2582@newsfep1-gui.server.ntli.net>
Source record: 35018

Hi guys,
Does anyone know where on the web I can find
a minimal component schematic to build a PLL
or DDS synthesiser which will give me a clean 1 to 30MHz signal?
Any assistance will be greatly appreciated.

Duncan G4DFV

3917. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 22:45:16 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87llwhfon7.fld@barrow.com>
Source record: 35020

sw@ai.mit.edu (Sandy Wells) wrote:
>donut <none@none.com> wrote in message news:<Xns938F858B02F04donut@216.102.43.227>...
>> et472@FreeNet.Carleton.CA (Michael Black) wrote:
>> > Joe McElvenney (ximac@btinternet.com) writes:
>> >> Hi,
>> >>
>> >>> I am wondering what the passband characteristics of a BC453
>> >>> are if the transformers are set for max selectivity
>> >>> (loosest coupling, no stagger). How nice is that as a
>> >>> CW filter?
>> >>>
>> >>> 73, NS1W

It was really great, in the 50's and 60's when most receivers
that didn't cost a fortune had bandwidths ranging from 4 to 10
kHz.

But for a number of reasons it isn't something you'd want to do
today other than as a demonstration of what was useful back
then.

>> >> Out of curiosity I went alooking.
>> >>
>> >> The SCR-274N manual wasn't too helpful, saying only that
>> >> the voice response of the BC-453 is well down at 1,500 hertz.
>> >> However, Byron Goodman's (W1DX) one-page article in QST for
>> >> January 1948, "The Lazy Man's Q5-er", shows a graph of the
>> >> receiver's overall response with the variable I.F. coupling
>> >> set to minimum. Surprisingly it is not as good as I would
>> >> have thought with a 6dB bandwidth of 2kHz and shape factor of
>> >> 3.25 (6/60dB).

Seems to me that it was possible to get it down to something
close to 1kHz, but I don't remember now how, or if positively
if. I may have added a little feedback to get a Q multiplier
effect to achieve that.

>> > That does seem less than was implied all these years.
>> >
>> > But, of course we are talking about 55 years ago. The whole
>> > point was to get better selectivity, but connecting the receiver
>> > to the 455KHz IF of your regular receiver. Likely the average
>> > receiver at the time did not have such great selectivity, so by
>> > adding the Q5-er one ended up with better results. It's all
>> > relative. Nowadays, people wouldn't bother because there are
>> > better ways of getting selectivity, so how many have gone back

>> > and looked at the actual specs? It worked then, and that was
>> > all that matters.
>> >
>> > Michael VE2BVW

And additionally many (most?) receivers and vfo's weren't stable
enough to make a 250Hz filter useful! At 1-2kHz it was unlikely
the signal would drift off too far to hear them at all.

>> Put a surplus 455 kHz Collins filter in. But, I guess if you had one, you
>> wouldn't need the BC-453...
>
>
>I didn't have the '48 QST, and I've been curious, it got
>a lot of recommentations in the 50's and 60's QSTs.
>
>I'm embarrased to admit that I was thinking of using a BC453 as a way to
>get RIT and cw filtering on my KWM-2...

I set up several BC453 Q5'ers in the early 60's. The first
receiver that I used was a pair of ARC-5 receivers, the 7-9mHz
one followed by a the BC453. I don't remember what they cost,
but it was all a 14 year old could afford.

But besides not being really all that selective by todays
standards, the problem with putting all of the selectivity at
the end of the IF chain and all of the AGC action before that
selectivity, leads to a less than pleasant experience if you are
likely to have adjacent signals that are relatively strong.

--
Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3918. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 22:59:14 UTC
From: krausemechanic@yahoo.com
Message-ID: <1eba1344.0306041459.2f310f4c@posting.google.com>
Source record: 35021

> I didn't have the '48 QST, and I've been curious, it got
> a lot of recommentations in the 50's and 60's QSTs.
>
> I'm embarrased to admit that I was thinking of using a BC453 as a way to
> get RIT and cw filtering on my KWM-2...

Dont forget that little piece a paper that says that if you want to do
it that way....do it!! Its your right as an individual! If you cant
find a original Q-5er there was a grey version made later with no
calibrated dial that is otherwise a carbon copy and so far has been a
lil cheaper

3919. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-04 23:34:11 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <vdt0jck6s6fh33@corp.supernews.com>
Source record: 35022

The WB2V circuit is pretty minimal, fairly popular, and Far Circuits sells the board. I think they also sell the QST article, although most of what you need was on the NJQRP site a few months back. They have since rearranged their site, tho, and I haven't been in search of that particular circuit since.

Although the original article used a 66 MHz oscillator, the part will work at least up to a 120 MHz oscillator on that board. The higher the oscillator frequency the easier the filtering and the less the phase noise, as well. The 120 MHz oscillators do draw a tad more current, but they are just as available as the lower frequencies.

Note, however, that "clean" is a relative term. Any PLL or DDS circuit is going to have a certain amount of close in noise that is virtually impossible to filter. The 9850 with a 100 or 120 MHz clock is pretty good, but it's not going to be as clean as a well designed analog oscillator.

..

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:JYtDa.3584$tV.2582@newsfep1-gui.server.ntli.net...
> Hi guys,
> Does anyone know where on the web I can find
> a minimal component schematic to build a PLL
> or DDS synthesiser which will give me a clean 1 to 30MHz signal?
> Any assistance will be greatly appreciated.
>
> Duncan G4DFV
>
>

3920. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 00:23:40 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0306041623.2a6a0d3a@posting.google.com>
Source record: 35023

Roy Lewallen <w7el@eznec.com> wrote in message news:<vdra8u4ee3f3cc@corp.supernews.com>...
> Andrew VK3BFA wrote:
> > . . .
> > The led turns on for 30% of the time and the radio works - when it
> > doesnt turn on, try poking/tapping/stressing the baords to check for a
> > loose connecton. Try heating and cooling - a domestic hairdryer for
> > both functions works well.
> > . . .
>
> A much more effective way of cooling is a can of spray cooler, available
> from just about any electronics store. If you can't find any, get a
> product in a pressurized can sold as a compressed "air" duster. It's
> essentially the same stuff (similar to Freon, but now allegedly without
> the ozone-depleting properties), but without a siphon tube -- spray with
> it upside down to make the liquid come out. You can get this at computer
> and office supply stores.
>
> The shock of the sudden cooling reveals a variety of problems, so spray
> cooler is very often the first thing a technician reaches for in order
> to track down an intermittent problem.
>
> Roy Lewallen, W7EL

Hello Roy,
the problem with freezer is that it has become so damm expensive
especially since we now have to be "environmentaly responsible". I
find the hairdryer hot finds a lot of faults, and on the cold setting
it will cool the lot down quickly. So saying this, I do use freezer
(must order another can this morning) but only to confirm a diagnosis
- its too expensive to shotgun a board with..

Regards,
Andrew VK3BFA

3921. FS: DIODES 1KV

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 00:59:53 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <dCwDa.110656$cO3.8033043@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35024

Still have 1N5408's at 1.5A for 10 cents each and a few 3A for 25 cents each. HOW MANY DO YOU NEED? hi, heytubeguy,Joe in MO.

3922. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 01:16:38 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <3e6tdvc9ap9a4h130kmd9frdbovm0lsu66@4ax.com>
Source record: 35025

On 4 Jun 2003 15:59:14 -0700, krausemechanic@yahoo.com
(Krausemechanic) wrote:

>> I didn't have the '48 QST, and I've been curious, it got
>> a lot of recommentations in the 50's and 60's QSTs.
>>
>> I'm embarrased to admit that I was thinking of using a BC453 as a way to
>> get RIT and cw filtering on my KWM-2...
>

I guess I have to put my 2 cents in here. One of my favorite toys is a
BC453 with an all band dual conversion converter ahead of it. I drag
it out every couple of years and make a few modifications on it.

I built it back in the 60s and keep improving it. It has amplified
AGC, a product detector, side band selection and an S meter. Covers 5
bands triple conversion, all with one 3.5 mhz crystal. Phone bands
only.

The selectivity is not bad. With the IFs set in the sharp mode I think
the nose is around 2 kc. The skirts are ok, not real steep like a
collins filter but adequate. It is more like a Drake 1A or 2A as far
as selectivity goes. Stability is excellent. I do get some images
pretty bad on some bands though. My first IF does not have enough
selectivity. Some day I am going to add another IF transformer there.

The audio quality is excellent on it. Of course I am using all new
audio stages in it. 6V6 in the output.

It will work pretty well as a CW filter behind the KWM2. Tuning it to
455 kc you will have a variable bandwidth filter! You can make the
bandwidth as sharp as you want it by just tuning the main dial across
the 455 kc IF in the KWM2. One side of the skirt will be the
mechanical filter and the other side will be the 85 kc IF. Of course
that side of the curve will not be quite as sharp as the mechanical
filter side but it won't be bad.

If you get creative and add a product detector and an agc circuit, you
can feed the agc back to the KWM2.

Be careful not to overdrive the product detector with too much 85 kc
IF. I had that problem with my little receiver for a number of years
until I figured out what was going on. With all the added gain from
the converter and the already hot BC453 I had lots of IF gain. I
copied the product detector from I think Stoners handbook. It turned
out that the coupling capacitor he used was way too big and over drove
the product detector. Works nice now.

It is also easy to overdrive the IFs if the BC453 is fed from an amplified stage as it is pretty hot. That contributes to product detector overdrive.

Have fun.
Gary K4FMX

3923. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 03:48:47 UTC
From: "A. Trent Phillips" <atrentphillipsnojunk@yahoo.com>
Message-ID: <z4zDa.34718$lo.3006715@newsread2.prod.itd.earthlink.net>
Source record: 35026

Sandy Wells wrote:
> Hi Gang --
>
> I am wondering what the passband characteristics of a BC453
> are if the transformers are set for max selectivity
> (loosest coupling, no stagger). How nice is that as a
> CW filter?
>
> 73, NS1W

I have the schematic and plans for something they called "the universal Q5'er" in the 1956 Radio Handbook. Looks a bit more flexable than the original. If I can get it scanned, I will post it.

Adam

3924. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 06:21:49 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <1kBDa.111011$cO3.8068380@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35027

A PLL would be rough to directly tune in that range, because of the
difficulty of designing a VCO with a flat KV characteristic over that kind
of tuning range. You could have the oscillator running from 45 to 75MHz,
though, and translate it down with a mixer, but that complicates things a
bit. A DDS is an ok way to go, if you don't mind those artifacts in the
output. I've got a DDS design up on my website that tunes from 10.7 to
40.7MHz, and by changing the assembly code and recompiling, the unit will
operate with no offset, meaning what you see on the digital display is what
you get at the output. I do have new code, that lets you program the offset
on the fly, and it is designed to work with the 2-line Optrex type of
displays that you see on the surplus market. This is for an Analog Devices
AD9851.
I hope this helps.

Pete

xpyttl <xpyttl_nospam@earthling.net> wrote in message
news:vdt0jck6s6fh33@corp.supernews.com...
> The WB2V circuit is pretty minimal, fairly popular, and Far Circuits sells
> the board. I think they also sell the QST article, although most of what
> you need was on the NJQRP site a few months back. They have since
> rearranged their site, tho, and I haven't been in search of that
particular
> circuit since.
>
> Although the original article used a 66 MHz oscillator, the part will work
> at least up to a 120 MHz oscillator on that board. The higher the
> oscillator frequency the easier the filtering and the less the phase
noise,
> as well. The 120 MHz oscillators do draw a tad more current, but they are
> just as available as the lower frequencies.
>
> Note, however, that "clean" is a relative term. Any PLL or DDS circuit is
> going to have a certain amount of close in noise that is virtually
> impossible to filter. The 9850 with a 100 or 120 MHz clock is pretty
good,
> but it's not going to be as clean as a well designed analog oscillator.
>
> ..
>
> "Duncan Walters" <pentode@ntlworld.com> wrote in message
> news:JYtDa.3584$tV.2582@newsfep1-gui.server.ntli.net...
> > Hi guys,
> > Does anyone know where on the web I can find
> > a minimal component schematic to build a PLL

> > or DDS synthesiser which will give me a clean 1 to 30MHz signal?
> > Any assistance will be greatly appreciated.
> >
> > Duncan G4DFV
> >
> >
>
>

3925. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 06:34:09 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bbmo91$12l$0@208.206.142.108>
Source record: 35028

Roy Lewallen wrote:

>
> A much more effective way of cooling is a can of spray cooler, available
> from just about any electronics store.............
>
> The shock of the sudden cooling reveals a variety of problems, so spray
> cooler is very often the first thing a technician reaches for in order
> to track down an intermittent problem.

Back in '62 I was a tech at the Army TV station at the Signal School at Fort Monmouth, NJ.. For a time I was assigned on a pair of very early videotape recorders. That was long before cassettes of any sort, these things used 10 inch open reels of 2- inch wide tape rolling across an open headwheel assembly
spinning at 16,750 rpm, and the machine consisted of three 6 foot equipment racks full of chassis which were mounted on slides so that each could be extended outside the rack for service. Compact it was not.

One day the thing developed a problem which placed a horizontal black line across the screen. I soon traced the difficulty to one of the slide-out chassis, and extended it, preparing to test further when the trouble disappeared.
The drop in temperature, not that many degrees from the forced air environment inside the cabinet rack, was enough to make the problem disappear. When I slid the rack back inside the cabinet, the fault would come back.
So I had to take the opposite tack in isolating the faulty component. I used a desk lamp held close to the circuit board to heat the board and induce the fault, then used a file card to cover each component on the board until I shielded the one which, with the heat source removed, caused the trouble to disappear. The problem part was a diode which had changed characteristics just enough. Replacing the diode cleared the fault.

I had a can of spray coolant, but not one with heat. : -)

Low tech indeed, but quick, and equally effective.

Dick

3926. Parts for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 16:38:03 UTC
From: brian@iquest.net
Message-ID: <93917C650brianiquestnet@207.217.77.22>
Source record: 35029

Junkbox Surplus Parts for Sale as of 05/31/03
==========

NEW ITEMS

I have 200 excess pcs of 5.000 Mhz crystals. These are the miniture crystals like you see in the latest QRP Quarterly. Tiny round crystals with two wire leads, I think I've seen these in watches. If we ever get 60m these could be a lot of fun.
50 for $4.00 shipped to the USA.

I have 400 pcs of 102J (1000pf) Shinyei ceramic caps rated at 630 VDC. These are in bags of 200.
$5.50 for 200 including USA shipping.

I have surplus 50K 1 Turn linear taper pots, about 25 each. These are chassis mount pots with the nut. About the size of a nickle, and about 1/2 inch deep with a 1/4 inch shaft about 1/2 inch long.
5 for $5.00 including USA shipping.

2.5/5.5mm Coaxial Power Jacks for PCB insertion or Manhattan install
10 for $2.50

285pf Green Square Plastic Cap, PC Board Insertion 10%
100 for $4.00

220pf 5% 63V SMD Caps - Surface Mount size is 0806
50 for $1.00 PLUS you must send a SASE for return.

Odd Items
==========
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
==========
All caps now 50/$3 or 100/$5
==========
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%

.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==========
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7 100/$30
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$8.00
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4

Op AMPS
==========
LM386N-1 - Audio Amps 5 for $3.00

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $3.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

3927. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-05 20:20:15 UTC
From: Bob P <kb8tlHATESSPAM@yahoo.COM>
Message-ID: <3CNDa.2059$9p2.386147447@newssvr10.news.prodigy.com>
Source record: 35030

So Pete,
Can you post the address of your website?
tnx
Bob
kb8tl

"Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
news:1kBDa.111011$cO3.8068380@bgtnsc04-news.ops.worldnet.att.net...
> A PLL would be rough to directly tune in that range, because of the
> difficulty of designing a VCO with a flat KV characteristic over that kind
> of tuning range. You could have the oscillator running from 45 to 75MHz,
> though, and translate it down with a mixer, but that complicates things a
> bit. A DDS is an ok way to go, if you don't mind those artifacts in the
> output. I've got a DDS design up on my website that tunes from 10.7 to
> 40.7MHz, and by changing the assembly code and recompiling, the unit will
> operate with no offset, meaning what you see on the digital display is
what
> you get at the output. I do have new code, that lets you program the
offset
> on the fly, and it is designed to work with the 2-line Optrex type of
> displays that you see on the surplus market. This is for an Analog
Devices
> AD9851.
> I hope this helps.
>
> Pete

3928. PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 03:20:40 UTC
From: Northern Lights <phildotharder@adelphia.net>
Message-ID: <cMTDa.3940$xM5.2537017@news2.news.adelphia.net>
Source record: 35031

I would like to build a morse code oscillator circuit that utilizes an MJ2955 (PNP) power transisitor. However, I don't have access to this transistor, but do have access to its complimentary transistor, 2N3055 (NPN). Can I just reverse the polarity of the battery that powers the circuit so that I can utilize the 2N3055 instead?

3929. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 04:36:45 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EE01B62.907CEE72@rica.net>
Source record: 35032

Northern Lights wrote:
>
> I would like to build a morse code oscillator circuit that utilizes an
> MJ2955 (PNP) power transisitor. However, I don't have access to this
> transistor, but do have access to its complimentary transistor, 2N3055
> (NPN). Can I just reverse the polarity of the battery that powers the
> circuit so that I can utilize the 2N3055 instead?

Yes.
--
John Popelish

3930. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 04:50:06 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <3EE01DFF.3090701@invalid.invalid>
Source record: 35033

Northern Lights wrote:
> I would like to build a morse code oscillator circuit that utilizes an
> MJ2955 (PNP) power transisitor. However, I don't have access to this
> transistor, but do have access to its complimentary transistor, 2N3055
> (NPN). Can I just reverse the polarity of the battery that powers the
> circuit so that I can utilize the 2N3055 instead?

Yes. If there are any electrolytic capacitors in the circuit you'll
have to reverse their polarity too.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3931. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 06:15:47 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <nkWDa.112554$cO3.8188148@bgtnsc04-news.ops.worldnet.att.net>
Source record: 35034

Sure. This is the URL:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html

Pete

Bob P <kb8tlHATESSPAM@yahoo.COM> wrote in message
news:3CNDa.2059$9p2.386147447@newssvr10.news.prodigy.com...
> So Pete,
> Can you post the address of your website?
> tnx
> Bob
> kb8tl
>
> "Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
> news:1kBDa.111011$cO3.8068380@bgtnsc04-news.ops.worldnet.att.net...
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> > difficulty of designing a VCO with a flat KV characteristic over that
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> > of tuning range. You could have the oscillator running from 45 to
75MHz,
> > though, and translate it down with a mixer, but that complicates things
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> > bit. A DDS is an ok way to go, if you don't mind those artifacts in the
> > output. I've got a DDS design up on my website that tunes from 10.7 to
> > 40.7MHz, and by changing the assembly code and recompiling, the unit
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> > operate with no offset, meaning what you see on the digital display is
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> > you get at the output. I do have new code, that lets you program the
> offset
> > on the fly, and it is designed to work with the 2-line Optrex type of
> > displays that you see on the surplus market. This is for an Analog
> Devices
> > AD9851.
> > I hope this helps.
> >
> > Pete
>
>

3932. RE: valves 813

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 11:22:00 UTC
From: Angelo <cavril52@iprimus.com.au>
Message-ID: <3ee0795c$1_1@news.iprimus.com.au>
Source record: 35035

I have 3 new 813 still in the original carton, Please make an offer

3933. FA: Audio Power Filament Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 16:07:29 UTC
From: Ken <abcd@abcdcba2468.com>
Message-ID: <060620031207300182%abcd@abcdcba2468.com>
Source record: 35036
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.homebrew

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3028978403

3934. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 21:20:45 UTC
From: Robert Kelley <pasha@kali.com>
Message-ID: <pan.2003.06.06.21.20.35.55583@kali.com>
Source record: 35037

On Wed, 04 Jun 2003 22:59:05 +0100, Duncan Walters wrote:

> Hi guys,
> Does anyone know where on the web I can find
> a minimal component schematic to build a PLL
> or DDS synthesiser which will give me a clean 1 to 30MHz signal?
> Any assistance will be greatly appreciated.
>
> Duncan G4DFV

Take a look at the Cypress clock generators like the CY22150

http://www.cypress.com/products/datasheet.cfm?partnum=CY22150

They are easy to use.

3935. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-06 22:59:42 UTC
From: c.a.m@antispam.blueyonder.co.uk
Message-ID: <i272evs0mdue81k0glulatokb8qo5mpm1i@4ax.com>
Source record: 35038

> I would like to build a morse code oscillator circuit that utilizes an
> MJ2955 (PNP) power transisitor. However, I don't have access to this
> transistor, but do have access to its complimentary transistor, 2N3055
> (NPN). Can I just reverse the polarity of the battery that powers the
> circuit so that I can utilize the 2N3055 instead?

That must be some morse code oscillator !

Does it just not bother with RF and generated a loud enough tone that RF is not required or something ?

Those transistors are somewhat beefy for a ickle audio oscillator :)

Clive

3936. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-07 14:41:47 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3EE1F9AB.4D12B521@clifto.com>
Source record: 35039

Roy Lewallen wrote:
> A much more effective way of cooling is a can of spray cooler, available
> from just about any electronics store. If you can't find any, get a
> product in a pressurized can sold as a compressed "air" duster. It's
> essentially the same stuff (similar to Freon, but now allegedly without
> the ozone-depleting properties), but without a siphon tube -- spray with
> it upside down to make the liquid come out. You can get this at computer
> and office supply stores.

Costco. Three big cans for under ten dollars.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

3937. Raytheon RK-63 Triodes Wanted:

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-07 15:39:47 UTC
From: yardleyite@aol.com
Message-ID: <20030607113947.08019.00000145@mb-m18.aol.com>
Source record: 35040

Hello,
If anyone has any Raytheon RK-63's , new or used for sale please let me know. They're needed as spares for a homebrew transmitter.
Mod-U-Later,
Joe Cro N3IBX

3938. MSM5524RS IC for Kewood Trio R-1000 and Yaseu FRG-7700

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-07 15:43:13 UTC
From: wor <wor73@gmx.net>
Message-ID: <3ee208d9$1@news.starhub.net.sg>
Source record: 35041
Cross-posted to: nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.scanner,rec.radio.shortwave,sci.electronics.components,uk.radio.amateur

Hi,

The Oki MSM5524 is both a Display and Frequency Counter widely used in FRG7700 and R1000.

I managed to save a couple of them during the early 90's and they are still in good condition. Each IC will cost US60. They were bought as spares when I previously repaired my R1000. Hopefully, it may help to solve your malfunction display.

I can email you a softcopy of the R1000 schematic as well.
Let me know if you like to have the chip for repair or spares.

Thanks and Regards
wor
Singapore

3939. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 02:55:23 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <c9-dnVKUeYUyOH-jRTvU2Q@ctc.net>
Source record: 35043

```
>
> > I would like to build a morse code oscillator circuit that utilizes an
> > MJ2955 (PNP) power transisitor. However, I don't have access to this
> > transistor, but do have access to its complimentary transistor, 2N3055
> > (NPN). Can I just reverse the polarity of the battery that powers the
> > circuit so that I can utilize the 2N3055 instead?
>
> That must be some morse code oscillator !
>
> Does it just not bother with RF and generated a loud enough tone that RF
is not
> required or something ?
>
> Those transistors are somewhat beefy for a ickle audio oscillator :)
>

About 30 years ago for a dollar or two there were some circuit board CPOs
that used a to-3 power transistor with no heatsink and another small one.
Think they ran off either one or two batteries. You hooked the batteries ,
key, and speaker to it. Don't remember a volume control. They were not all
that loud.
```

3940. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 03:31:29 UTC
From: Northern Lights <phildotharder@adelphia.net>
Message-ID: <l6yEa.246$Hw.294253@news2.news.adelphia.net>
Source record: 35044

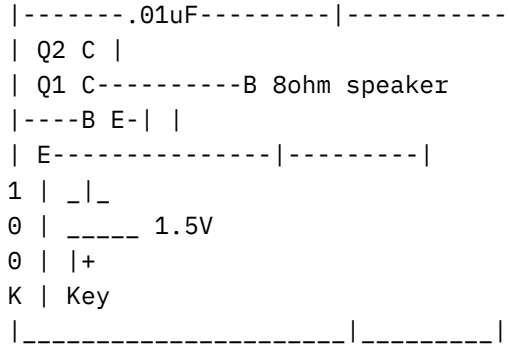
See QST, Jan 1990, p. 45. This circuit meant as a simple project for a youngster.

"Paul Burridge" <redscar@waitrose.notformail.com> wrote in message news:v6d5evohtb5g35c5bbhfmf5mpn1r2io3i8@4ax.com...
> On Fri, 06 Jun 2003 23:59:42 +0100, c.a.m@antispam.blueyonder.co.uk
> wrote:
>
> >
> >> I would like to build a morse code oscillator circuit that utilizes an
> >> MJ2955 (PNP) power transisitor. However, I don't have access to this
> >> transistor, but do have access to its complimentary transistor, 2N3055
> >> (NPN). Can I just reverse the polarity of the battery that powers the
> >> circuit so that I can utilize the 2N3055 instead?
> >
> >That must be some morse code oscillator !
> >
> >Does it just not bother with RF and generated a loud enough tone that RF is not
> >required or something ?
> >
> >Those transistors are somewhat beefy for a ickle audio oscillator :)
>
> That's exactly what I was thinking. Perhaps the OP is just very, very
> deaf! :-)

3941. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 04:06:46 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <bbucom$9q1$1@freenet9.carleton.ca>
Source record: 35045

"Ralph Mowery" (rmowery@ctc.net) writes:
>>
>> > I would like to build a morse code oscillator circuit that utilizes an
>> > MJ2955 (PNP) power transisitor. However, I don't have access to this
>> > transistor, but do have access to its complimentary transistor, 2N3055
>> > (NPN). Can I just reverse the polarity of the battery that powers the
>> > circuit so that I can utilize the 2N3055 instead?
>>
>> That must be some morse code oscillator !
>>
>> Does it just not bother with RF and generated a loud enough tone that RF
> is not
>> required or something ?
>>
>> Those transistors are somewhat beefy for a ickle audio oscillator :)
>>
>
> About 30 years ago for a dollar or two there were some circuit board CPOs
> that used a to-3 power transistor with no heatsink and another small one.
> Think they ran off either one or two batteries. You hooked the batteries ,
> key, and speaker to it. Don't remember a volume control. They were not all
> that loud.
>
>
For that matter, the first ARRL Handbook I ever got, the 1971 edition,
has a similar circuit.



I hope that's clear.

Q1 is a small signal NPN, and Q2 is a TO-3 PNP. I'm too lazy to
look up whether they were germanium or silicon, but a possible transistor
for Q1 is a 2N2102 and Q2 is a 2N2869

The emitter of Q2 does not connect to the emitter of Q1, in case my drawing is not clear.

This sort of circuit showed up in quite a few places.

Michael VE2BVW

3942. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 05:44:41 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <v6d5evohtb5g35c5bbhfmf5mpn1r2io3i8@4ax.com>
Source record: 35042

On Fri, 06 Jun 2003 23:59:42 +0100, c.a.m@antispam.blueyonder.co.uk
wrote:

>
>> I would like to build a morse code oscillator circuit that utilizes an
>> MJ2955 (PNP) power transisitor. However, I don't have access to this
>> transistor, but do have access to its complimentary transistor, 2N3055
>> (NPN). Can I just reverse the polarity of the battery that powers the
>> circuit so that I can utilize the 2N3055 instead?
>
>That must be some morse code oscillator !
>
>Does it just not bother with RF and generated a loud enough tone that RF is not
>required or something ?
>
>Those transistors are somewhat beefy for a ickle audio oscillator :)

That's exactly what I was thinking. Perhaps the OP is just very, very
deaf! :-)

3943. Re: HF mixer module

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 10:22:20 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <w7EEa.191735$ja4.10245329@bgtnsc05-news.ops.worldnet.att.net>
Source record: 35046

Relays work well, as long as you use RF types with good isolation.

Richard <nearlynews_email@ntlworld.com> wrote in message
news:bbis9h$9vu06$1@ID-150848.news.dfncis.de...
>
> "Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
> news:auYCa.108507$cO3.7849220@bgtnsc04-news.ops.worldnet.att.net...
> > You can use PIN diode swithing for the filters.....it works out
> pretty
> > well.
> >
> > Pete
>
> I like the idea of small relays.
>

3944. Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 16:22:07 UTC
From: Andy Brinkley <andy@brinkleyelectronics.com>
Message-ID: <PoJEa.32137$nr.3468604@twister.southeast.rr.com>
Source record: 34947

Looking for suggestions for conformal coatings for PCBs.

I am looking for an opaque coating but have had no success in finding a coating that is not transparent.

Any leads would be appreciated.

TNX

Andy

NC Certified Firefighter III / Instructor II / EMT-A
FCC Licensed Technician / Amateur Call NC4AB
http://www.brinkleyelectronics.com

3945. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 17:42:10 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <l7t6evsqgr0dtadpjbgne1ufom48rn2d3k@4ax.com>
Source record: 34968

On Sun, 08 Jun 2003 16:22:07 GMT, "Andy Brinkley"
<andy@brinkleyelectronics.com> wrote:

>Looking for suggestions for conformal coatings for PCBs.
>
>I am looking for an opaque coating but have had no success in finding a
>coating that is not transparent.
>
>Any leads would be appreciated.
>
>TNX
>
>Andy
>

A possibility or two here:
http://www.gcwaldom.com/catalog.html

and a few more here:
http://www.circuitspecialists.com/level.itml/icOid/304

-fb-

3946. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 19:45:30 UTC
From: averyfineman@aol.com
Message-ID: <20030608154530.21428.00000403@mb-m23.aol.com>
Source record: 34969

In article <PoJEa.32137$nr.3468604@twister.southeast.rr.com>, "Andy Brinkley"
<andy@brinkleyelectronics.com> writes:

>Looking for suggestions for conformal coatings for PCBs.
>
>I am looking for an opaque coating but have had no success in finding a
>coating that is not transparent.
>
>Any leads would be appreciated.

Out of curiosity, WHY opaque? :-)

Conformal coatings have been used to protect circuit board
assemblies from conductive garbage falling or floating (for
spacecraft electronics) across the traces. Traditionally they've
been transparent to be able to check out (visually) the board
conditions under the coating. Additionally, they've also had
some sort of flexibility to remove the coating to change
components covered by the coating.

If all you want is an opaque coating and don't expect to have
to work on the board again, any ordinary paint will work that
doesn't react with component materials. So-called latex
paints can be sprayed on with a very small gun or airbrush in
enclosed areas. I've used "spar varnish" on both PCBs and
especially for small toroidal inductors with some success; it
doesn't allow rework so it had better test right before coating.

Handyman type stores sell a tool handle coating in liquid form.
When cured it has some flexibility. Most kinds seem to be
opaque. Don't know if it reacts with circuit boards or components,
never tried it on that. A definite insulator on two types I've used
on hand tools.

Len Anderson
retired (from regular hours) electronic engineer person

3947. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 20:02:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ve75jrd7c0g53c@corp.supernews.com>
Source record: 34970

Perhaps you're looking for what's commonly called potting compound? You might try searching under that name.

Roy Lewallen, W7EL

Andy Brinkley wrote:
> Looking for suggestions for conformal coatings for PCBs.
>
> I am looking for an opaque coating but have had no success in finding a
> coating that is not transparent.
>
> Any leads would be appreciated.
>
> TNX
>
> Andy
>
> ---
> NC Certified Firefighter III / Instructor II / EMT-A
> FCC Licensed Technician / Amateur Call NC4AB
> http://www.brinkleyelectronics.com
>
>

3948. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 20:56:43 UTC
From: Andy Brinkley <andy@brinkleyelectronics.com>
Message-ID: <fqNEa.42679$_w.1465823@twister.southeast.rr.com>
Source record: 34971

Sorry for the confusion, the reason that I am looking for opaque is that I have a circuit board that I have designed that I don't want to be easily reverse engineered.

I was hoping that somewhere there was a conformal coating available that would meet my needs.

TNX
Andy

NC Certified Firefighter III / Instructor II / EMT-A
FCC Licensed Technician / Amateur Call NC4AB
http://www.brinkleyelectronics.com

3949. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 21:14:28 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <3c97evs5qgk9ib8qe1t0567u1fnh03p6lf@4ax.com>
Source record: 34972

On Sun, 08 Jun 2003 20:56:43 GMT, "Andy Brinkley"
<andy@brinkleyelectronics.com> wrote:

>Sorry for the confusion, the reason that I am looking for opaque is that I
>have a circuit board that I have designed that I don't want to be easily
>reverse engineered.
>
>I was hoping that somewhere there was a conformal coating available that
>would meet my needs.
>
I wondered about that. Some manufacturers do things like that.

The potting compound mentioned earlier might be ideal, as it is also
used to "bury" components. Otherwise, test epoxy paints for
conductivity. You could also use a good electronics grade clear
conformal coating, and then the epoxy paint if there is a problem.

Keep in mind that visual inspection is not the only way to reverse
engineer, with enough resources, any coating can be removed, and a
flouroscope or the like could be used.

Keep in mind that any of this will make your unit non-repairable.
Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3950. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 21:22:59 UTC
From: Bill & Suzie Whatley <whatley@frii.com>
Message-ID: <3ee3a905$0$203$75868355@news.frii.net>
Source record: 34973

Just be aware that there is a chemical that effectively removes both conformal coat and potting compound without damaging the components. It is a much slower process with potting compound but is is removable as well.

There are several types of epoxy that are much more difficult to remove. The cost more but you might want to consider them as well.

73

WA5VRL
Willis

3951. Very high lperformance 2m SSB/CW tranxceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 21:31:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3ee3aaa7.8116596@news.online.no>
Source record: 34974

have had some request for LA6LCA's high performance 2m ssb/cw remote
controlled transceiver using unusual techniqes, so I've put the block
circuit diagram on my home page at
http://home.online.no/~la8ak/d12.htm

73
Jan-Martin
LA8AK

USA has the best democracy money can buy!

remove "postage" to reply

3952. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 22:37:14 UTC
From: funkbastler <funkbastler@yahoo.com>
Message-ID: <dee7ev0cvd7k81q9r3bsk76a6te4lvlh61@4ax.com>
Source record: 34976

On Sun, 08 Jun 2003 20:56:43 GMT, "Andy Brinkley"
<andy@brinkleyelectronics.com> wrote:

>Sorry for the confusion, the reason that I am looking for opaque is that I
>have a circuit board that I have designed that I don't want to be easily
>reverse engineered.
>
>I was hoping that somewhere there was a conformal coating available that
>would meet my needs.
>
>TNX
>Andy
>

Look at http://www.circuitspecialists.com/level.itml/icOid/304 again.
Scroll down the page a bit - they have a product that they say
provides "technology security".

-fb-

3953. Re: Very high lperformance 2m SSB/CW tranxceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 22:37:56 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bc0dne$e9beg$1@ID-150848.news.dfncis.de>
Source record: 34975

J M Noeding wrote:
> have had some request for LA6LCA's high performance 2m ssb/cw remote
> controlled transceiver using unusual techniqes, so I've put the block
> circuit diagram on my home page at
> http://home.online.no/~la8ak/d12.htm
>
> 73
> Jan-Martin
> LA8AK
> ---
> USA has the best democracy money can buy!
>
> remove "postage" to reply

Noted.

Just need someone to flesh it out in the details.

3954. 2N6166S info

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 22:50:39 UTC
From: zindazenda <zen@ic24.net>
Message-ID: <ve7fe1d9bqjs4e@corp.supernews.com>
Source record: 34977

hello...

can anyone tell me if rf transistor 2N6166S is the same as 2N6166?
or do you have spec on it??

i am asking as i have just blown a couple up and really they should have
been fine.. assuming they are 100w out 150mhz 28v..
thanks simon g0zen

3955. AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-08 23:58:46 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.194d6cd3432d27fa989687@news-central.giganews.com>
Source record: 34978

This question may be related to one that Jan Wagner posted awhile back. Jan was having trouble with excessive jitter (bad enough to be visible on a scope) on the output of an AD9854 chip. I was thinking measurement error was to blame -- and posted as much -- but now I'm seeing something strangely similar on an old (mostly hand-wired) DDS prototype board.

This assembly has been working for over a year now, but recently started misbehaving. Investigation revealed that the AD9854ASQ DDS chip's output was very noisy/unstable:

http://www.speakeasy.net/~jmiles1/98541.gif (10 kB .GIF file)

Looking further into the problem, it appeared that the symptom was sensitive to the chip's temperature (tending to remedy itself as the assembly warmed up), and VERY sensitive to the (single-ended) clock signal level. Raising the clock input level to +10 dBm across 50 ohms cleaned up the resulting output waveform considerably, but it still showed "ears" characteristic of a PLL with degraded phase margin:

http://www.speakeasy.net/~jmiles1/98542.gif (10 kB .GIF file)

The PLL-like nature of these graphs suggested a problem with the chip's clock multiplier. I was able to confirm that indeed, the problem occurred ONLY with the DDS chip's internal PLL-based clock multiplier engaged, with a 10 MHz external clock being multiplied to frequencies between 80 and 120 MHz. With an unmultiplied 100 MHz external clock, the DDS works perfectly with no 'ears', spurs, or instability.

Because of the temperature-sensitive characteristic, I assumed the DDS chip was bad, and replaced it. Much to my surprise, the symptom remained. I checked power-supply connections and bypassing; everything's fine. Noise on both digital and analog Vdd pins is less than a few mV RMS.

At this time I don't understand what's going on with this assembly. It's not a complicated circuit; the AD9854 is a very robust, hard-to-screw-up chip, and in general there's very little to go wrong. I have a good deal of experience with the AD9852 / AD9854 parts, and have never seen this behavior before.

Has anyone else run into this weirdness? Jan, was your problem occurring with the clock multiplier engaged, or did it make a difference?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3956. Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 00:03:17 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0306081603.79236237@posting.google.com>
Source record: 34979

Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
The 40673 is going for $8 or better if you can find them at all.
Thanks, Doug N0WVA

3957. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 03:00:10 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <bc0t7qirj1@freenet9.carleton.ca>
Source record: 34980

Doug (janaeanddoug@netzero.net) writes:
> Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> The 40673 is going for $8 or better if you can find them at all.
> Thanks, Doug N0WVA

I think Dan's Small parts still has some various types of MOSFETs.
http://www.fix.net/dans.html

A few years back, I found at a dollar store RF preamps for the FM band, intended for auto use. Curious, I bought one and brought it home. It had a MOSFET inside, I think a 3N200. Since it was only a dollar, I went back and bought all that were left. I don't know if that was a lucky find or not, though the specific unit looked like something Radio Shack was selling. I've yet to get around to trying them, to see if they are any good.

I think some TV tuners use MOSFETs, though I'm not familiar enough with them to know how common or in what tuners or TV sets. Considering it's easy to pull tuners out of TV sets waiting for the garbage, that might be a source of MOSFETs.

I have a number of Delco digitally tuned car radios, and they have a significantly looking transistor for the FM RF stage. I guess I didn't bother tracing the circuit because it seemed a shame to even consider scrapping them. But if it is a MOSFET, that might be a way of getting some MOSFETs, since these are pretty common radios and I've picked them up for five dollars at garage sales and even found some in the garbage.

Other than that, I can't think of common consumer items that used MOSFETs, limiting their availability in scrap equipment.

Michael VE2BVW

3958. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 03:15:10 UTC
From: fmmck@aol.com
Message-ID: <20030608231510.04144.00000356@mb-m28.aol.com>
Source record: 34981

<< Does anyone know of a cheap substitute for the 40673 dual gate mosfet? >>

Doug-

In my opinion, the only reason anyone would buy a 40673, would be to have an exact replacement.

A couple of replacements I can think of, are the 3N200 and 3N201. I think either may have a better noise figure, but I don't know for sure if they both can be plugged into a 40673 socket and have DC voltages and currents come out right.

73, Fred, K4DII

3959. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 03:27:47 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bc0urj$99r$0@208.206.142.109>
Source record: 34982

Doug wrote:

> Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> The 40673 is going for $8 or better if you can find them at all.
> Thanks, Doug N0WVA

ECG454 or equivalent.

Dick

3960. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 07:50:43 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bc1e8jhfm1@sparta.btinternet.com>
Source record: 34983

"Doug" <janaeanddoug@netzero.net> wrote in message
news:360a820d.0306081603.79236237@posting.google.com...
> Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> The 40673 is going for $8 or better if you can find them at all.
> Thanks, Doug N0WVA

BF981 is easy to get here in the UK, made by Philips. I think it's been
replaced by the BF991.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3961. Calc. Ladder-filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 09:13:36 UTC
From: "P. Seifert" <p.seifert@addcom.de>
Message-ID: <bc1j1f$diut8$1@ID-74846.news.dfncis.de>
Source record: 34984

Hi,
just trying to build a 8-pole Ladder-filter for a QRP Rig.
Even if selected out of 30 pcs., the frequencies of the crystals differ
siginicantly (up to 150 Hz).
Does anyone has a source for calculation of ladder filters which takes into
account the real data of each individual xtal, not only a mean value?

TNX , Pedro, DF3YB

3962. Re: G3DXZ's Huff and Puff

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 10:09:51 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <bc1mdf$e19s0$1@ID-61331.news.dfncis.de>
Source record: 34985

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3EDB66CA.B920F603@neicoltech.org...
> Hi gang,
> In one of the RSGB's Technical Notes compendiums, there is a
> simplified version of PA0KSB's Huff & Puff oscillator stabilizer. The
> schematic shows a HC4060 counter chip with 2 outputs feeding an
> integrator. One of them is labeled pin 3 the other is blank.
> Also, the text below the schematic states Q11 and 13 are the outputs
> used from the 4060, but pin 3 is not one is these......so I have nothing
> but questions... ;) Does anyone have a complete and accurate
> schematic for this circuit?

You can find almost everything related to Huff Puff circuits at my website
http://www.hanssummers.com/radio/huffpuff/contents.htm.

Hans G0UPL

>
> Thanks
> Bob L. WB0POQ
>
>
>

3963. 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 11:34:30 UTC
From: brmadhukar@hotmail.com
Message-ID: <2c04c006.0306090334.3ec9394d@posting.google.com>
Source record: 34986

Hi,
This is revisiting a problem I had posted earlier. For a GPS RFIC
I have requirement of

a) LPF with cutoff at 30MHz
b) BPF with bandwidth of 8MHz at 15.42MHz

both with I/O impedance 4K ohm. With this impedance the Inductor
becomes very high valued. I had tried to reduce this impedance to
approximately 2K ohms and developed the filter but could not get
proper performance (a loss of 4dB - 6dB in performance). Both filters
were elliptic. Tom Bruhns referred me to some transforms but it could
not really help me in this case as the topology became more complex by
applying this. I am however looking into this to see if some other
configuration could be used with this transforms.

Meanwhile I would like to know any y useful info about, low freq high
impedance LC filters tips/ tricks or anything that is useful.

Thanks,

B R
Madhukar

3964. Re: Calc. Ladder-filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 13:07:35 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bc229f$sa9@library2.airnews.net>
Source record: 34987
Body handling: HTML body converted to readable text

"P. Seifert" wrote in message
news:bc1j1f$diut8$1@ID-74846.news.dfncis.de...
> Hi,
> just trying to build a 8-pole Ladder-filter for a QRP Rig.
> Even if selected out of 30 pcs., the frequencies of the crystals differ
> siginicantly (up to 150 Hz).
> Does anyone has a source for calculation of ladder filters which takes
into
> account the real data of each individual xtal, not only a mean value?

"W1FB's Design Notebook" includes reprints of a couple of W7ZOI and W1FB
articles that go into considerable detail on the design of Cohn crystal
ladder filters with just this kind of consideration.

3965. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 14:33:52 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <kV0Fa.144883$VP.36256267@twister.neo.rr.com>
Source record: 34988

The NTE222 is a direct replacement for the old 40673 also, the NTE454 will work.
Not sure of the price but since I have 6 ea. they couldn't have been too much.

73
Richard WB8KRN

"Doug" <janaeanddoug@netzero.net> wrote in message
news:360a820d.0306081603.79236237@posting.google.com...
| Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
| The 40673 is going for $8 or better if you can find them at all.
| Thanks, Doug N0WVA

3966. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 14:54:18 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <rljer-fi.ln1@skelton.news.cis.dfn.de>
Source record: 34992

Doug wrote:
> Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> The 40673 is going for $8 or better if you can find them at all.
> Thanks, Doug N0WVA

Metal can:

3N201 or 3SK45

Plastic package:

BF961, BF981, BF988, 3SK88.

73, Ed. EI9GQ.

--

Remove 'X' to reply by e-mail
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

3967. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 15:01:48 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <wj1Fa.78596$d51.147231@sccrnsc01>
Source record: 34989

> Meanwhile I would like to know any y useful info about, low freq high
> impedance LC filters tips/ tricks or anything that is useful.

Design it for whatever impedance it likes and wind a couple little
transformers.

W4ZCB

3968. Re: Calc. Ladder-filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 15:03:14 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Sk1Fa.127601$M01.63577@sccrnsc02>
Source record: 34990
Body handling: HTML body converted to readable text

"John R. Strohm" wrote in message
news:bc229f$sa9@library2.airnews.net...
> "P. Seifert" wrote in message
> news:bc1j1f$diut8$1@ID-74846.news.dfncis.de...
> > Hi,
> > just trying to build a 8-pole Ladder-filter for a QRP Rig.
> > Even if selected out of 30 pcs., the frequencies of the crystals differ
> > siginicantly (up to 150 Hz).
> > Does anyone has a source for calculation of ladder filters which takes
> into
> > account the real data of each individual xtal, not only a mean value?
>
> "W1FB's Design Notebook" includes reprints of a couple of W7ZOI and W1FB
> articles that go into considerable detail on the design of Cohn crystal
> ladder filters with just this kind of consideration.
>
> Hayward has in both IRFD and Experimental methods the software L.exe and
X.exe. They do all the number crunching for you.

W4ZCB

3969. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 16:33:08 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0306090833.22cda644@posting.google.com>
Source record: 34991

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:<bc1e8jhfm1@sparta.btinternet.com>...
> "Doug" <janaeanddoug@netzero.net> wrote in message
> news:360a820d.0306081603.79236237@posting.google.com...
> > Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> > The 40673 is going for $8 or better if you can find them at all.
> > Thanks, Doug N0WVA
>
> BF981 is easy to get here in the UK, made by Philips. I think it's been
> replaced by the BF991.

I bought a dozen BF981s at Cricklewood Electronics the
last time I was in London. My usual mail-order source
for European components is Barend Hendriksen, whose web
page lists all the usual suspects.

The 40673 is a collector's item now, and attracts
collector's item prices...

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

3970. Need Siemens Level Oscillator Schem.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-09 22:23:37 UTC
From: "H. Simpson" <h.a.simpson@worldnet.att.net>
Message-ID: <JN7Fa.196321$ja4.10408990@bgtnsc05-news.ops.worldnet.att.net>
Source record: 34993

I'm trying to get a Siemens Level Oscillator W2006 (0 to 17 MHz) up and running. This is beautifully built mechanically, but unfortunately mine's not working electrically and is a bit more complex than the average sig. generator. A schematic and any additional information sure would help. Does anyone have the schematic or manual info on this? I've searched the web to no avail. This unit was made in the late 60's

Thanks in advance.

Al, WA1VHD

3971. Bruene coupler for VHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 01:18:04 UTC
From: Angela & Gary Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-94EDAE.20180309062003@corp.supernews.com>
Source record: 34994

Anybody seen a design for a Bruene coupler which will work at VHF frequencies (preferably to 100 W) ?? Tnx in advance.

Gary

3972. WANTED: ICOM Tone Board for IC-24AT Portable

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 01:27:19 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <LwaFa.27408$b67.4024729@read2.cgocable.net>
Source record: 34995
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Recently picked up an ICOM IC-24AT Dual Band Portable that works Great..BUT
is missing the CTCSS Module.
Does anyone have a UT-50 OR UT-51 Tone Module for the above radio that is
surplus to thier needs?
Please advise availability & Cost.
Thank You.....Norm VE3CZI

3973. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 02:20:58 UTC
From: Cliff Curry <cliffcurry323@attbi.com>
Message-ID: <egbFa.895147$OV.834565@rwcrnsc54>
Source record: 34996

Harold Johnson's advice is the best.

It is quite difficult to design at a high impedance like
4KHz at frequencies in the tens of megahertz. The effects of parisitic
capacitance become
too great.

Cliff Curry

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:wj1Fa.78596$d51.147231@sccrnsc01...
>
> > Meanwhile I would like to know any y useful info about, low freq high
> > impedance LC filters tips/ tricks or anything that is useful.
>
> Design it for whatever impedance it likes and wind a couple little
> transformers.
>
> W4ZCB
>
>

3974. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 04:47:41 UTC
From: averyfineman@aol.com
Message-ID: <20030610004741.23406.00000111@mb-m27.aol.com>
Source record: 34997

In article <ve75jrd7c0g53c@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>Perhaps you're looking for what's commonly called potting compound? You
>might try searching under that name.
>
>Roy Lewallen, W7EL
>
>Andy Brinkley wrote:
>> Looking for suggestions for conformal coatings for PCBs.
>>
>> I am looking for an opaque coating but have had no success in finding a
>> coating that is not transparent.
>>
>> Any leads would be appreciated.

Roy, some FYI:

Conformal Coatings are regularly applied to assembled
spacecraft PCBs. These are nearly all see-through types with
no coloring, usually only a dye that is visible under UV. The
purpose there is to keep metallic detrius away from conductive
paths in micro-gravity.

Back around 35 years ago, JPL had authorized only three
compounds suitable for spacecraft use, all silicone based and
all having zero to near-zero outgassing properties; outgassing
could have affected optical sensors on spacecraft among other
things. Those included a potting compound for embedding
assemblies such as "cordwood" structures then considered to
be miniaturization. Things have improved considerably since
the mid to late sixties.

Lately, some PCB makers have called the (usually green) very
light coating on PCBs as "conformal coating" but that is only for
the PCB without mounted components. Component positioning
silkscreening marking is then done over this very light coating.

I think that the conformal coating that Andy is talking about needs
to have some resiliance/flexibility to tolerate slight differences in
component expansion-contraction with temperature. For that
reason I mentioned the tool-handle dipping compound that leaves a
slightly resilient covering on handles. Many drills, taps, dies on
tool supply shelves are also dipped in a similar compound, usually
a clear one to check out the sharp edges protected by the compound.
Both can be removed with a utility knife.

Len Anderson
retired (from regular hours) electronic engineer person

3975. Re: Suggestions on Conformal Coatings ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 06:00:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <veat09k448td9b@corp.supernews.com>
Source record: 34998

My background is a bit different from yours. In the test equipment manufacturing industry, the green coating on PC boards is called "solder resist" because of its chief function -- to prevent solder from sticking to most areas during the wave soldering process. Without it, a typical board becomes a real mess, with solder bridges and glops of solder where it doesn't belong. It does provides some rudimentary protection against corrosion and contamination, but that's not its primary purpose. Conformal coating, which covers the components as you say, isn't used very often on boards intended for indoor use, unless extremely small leakage currents would cause a problem, or for other special reasons. I once worked for a company that made traffic logging equipment. It was micropower to conserve batteries, and the instruments sat outside -- so moisture was a problem. I recall we had a dickens of a time finding a good conformal coating that wasn't hygroscopic. I've seen potting compound used to conceal circuitry -- and I've cut it off with an X-Acto knife, had it chemically dissolved if too hard for a knife, and had modules X-rayed to find out what was inside. (None of this, I hasten to say, was for the purpose of stealing somebody's intellectual property.) A silicone potting compound was also used for a 30 kV CRT power supply. Without the potting, the field gradient was high enough to cause a lot of corona -- to troubleshoot a supply or do development work on an unpotted unit, we immersed it in Freon.

The handle-dipping stuff sounds like a good solution for some purposes. But now that the original poster has told us the intent is to conceal the circuitry, something harder to remove might be preferable.

Roy Lewallen, W7EL

Avery Fineman wrote:
> In article <ve75jrd7c0g53c@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
> writes:
>
>
>>Perhaps you're looking for what's commonly called potting compound? You
>>might try searching under that name.
>>
>>Roy Lewallen, W7EL
>>
>>Andy Brinkley wrote:
>>
>>>Looking for suggestions for conformal coatings for PCBs.
>>>
>>>I am looking for an opaque coating but have had no success in finding a
>>>coating that is not transparent.

>>>
>>>Any leads would be appreciated.
>
>
> Roy, some FYI:
>
> Conformal Coatings are regularly applied to assembled
> spacecraft PCBs. These are nearly all see-through types with
> no coloring, usually only a dye that is visible under UV. The
> purpose there is to keep metallic detrius away from conductive
> paths in micro-gravity.
>
> Back around 35 years ago, JPL had authorized only three
> compounds suitable for spacecraft use, all silicone based and
> all having zero to near-zero outgassing properties; outgassing
> could have affected optical sensors on spacecraft among other
> things. Those included a potting compound for embedding
> assemblies such as "cordwood" structures then considered to
> be miniaturization. Things have improved considerably since
> the mid to late sixties.
>
> Lately, some PCB makers have called the (usually green) very
> light coating on PCBs as "conformal coating" but that is only for
> the PCB without mounted components. Component positioning
> silkscreening marking is then done over this very light coating.
>
> I think that the conformal coating that Andy is talking about needs
> to have some resiliance/flexibility to tolerate slight differences in
> component expansion-contraction with temperature. For that
> reason I mentioned the tool-handle dipping compound that leaves a
> slightly resilient covering on handles. Many drills, taps, dies on
> tool supply shelves are also dipped in a similar compound, usually
> a clear one to check out the sharp edges protected by the compound.
> Both can be removed with a utility knife.
>
> Len Anderson
> retired (from regular hours) electronic engineer person

3976. Re: Calc. Ladder-filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 07:19:25 UTC
From: "Dr. P.Seifert" <pseifert@thorlabs.com>
Message-ID: <bc40pk$n1n$1@news.space.net>
Source record: 34999
Body handling: HTML body converted to readable text

Hi John and Harold,

thanks for your hints.
I'll try to get those literature here.

73', Pedro, DF3YB

"P. Seifert" schrieb im Newsbeitrag
news:bc1j1f$diut8$1@ID-74846.news.dfncis.de...
> Hi,
> just trying to build a 8-pole Ladder-filter for a QRP Rig.
> Even if selected out of 30 pcs., the frequencies of the crystals differ
> siginicantly (up to 150 Hz).
> Does anyone has a source for calculation of ladder filters which takes
into
> account the real data of each individual xtal, not only a mean value?
>
> TNX , Pedro, DF3YB
>
>

3977. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 12:35:45 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3ee5d0da$0$6715@echo-01.iinet.net.au>
Source record: 35000

John
Is it something to do with the PLL filter?. There is an RC network to VCC
from memory as the loop filter

Richard

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:MPG.194d6cd3432d27fa989687@news-central.giganews.com...
> This question may be related to one that Jan Wagner posted awhile back.
> Jan was having trouble with excessive jitter (bad enough to be visible
> on a scope) on the output of an AD9854 chip. I was thinking measurement
> error was to blame -- and posted as much -- but now I'm seeing something
> strangely similar on an old (mostly hand-wired) DDS prototype board.
>
> This assembly has been working for over a year now, but recently started
> misbehaving. Investigation revealed that the AD9854ASQ DDS chip's
> output was very noisy/unstable:
>
> http://www.speakeasy.net/~jmiles1/98541.gif (10 kB .GIF file)
>
> Looking further into the problem, it appeared that the symptom was
> sensitive to the chip's temperature (tending to remedy itself as the
> assembly warmed up), and VERY sensitive to the (single-ended) clock
> signal level. Raising the clock input level to +10 dBm across 50 ohms
> cleaned up the resulting output waveform considerably, but it still
> showed "ears" characteristic of a PLL with degraded phase margin:
>
> http://www.speakeasy.net/~jmiles1/98542.gif (10 kB .GIF file)
>
> The PLL-like nature of these graphs suggested a problem with the chip's
> clock multiplier. I was able to confirm that indeed, the problem
> occurred ONLY with the DDS chip's internal PLL-based clock multiplier
> engaged, with a 10 MHz external clock being multiplied to frequencies
> between 80 and 120 MHz. With an unmultiplied 100 MHz external clock,
> the DDS works perfectly with no 'ears', spurs, or instability.
>
> Because of the temperature-sensitive characteristic, I assumed the DDS
> chip was bad, and replaced it. Much to my surprise, the symptom
> remained. I checked power-supply connections and bypassing;
> everything's fine. Noise on both digital and analog Vdd pins is less
> than a few mV RMS.
>
> At this time I don't understand what's going on with this assembly.
> It's not a complicated circuit; the AD9854 is a very robust, hard-to-
> screw-up chip, and in general there's very little to go wrong. I have a

> good deal of experience with the AD9852 / AD9854 parts, and have never
> seen this behavior before.
>
> Has anyone else run into this weirdness? Jan, was your problem
> occurring with the clock multiplier engaged, or did it make a
> difference?
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3978. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 16:30:44 UTC
From: sw@ai.mit.edu
Message-ID: <3ba51ab6.0306100830.6935bf4a@posting.google.com>
Source record: 35001

Gary Schafer <gaschafer@attbi.com> wrote in message
news:<3e6tdvc9ap9a4h130kmd9frdbovm0lsu66@4ax.com>...
> On 4 Jun 2003 15:59:14 -0700, krausemechanic@yahoo.com
> (Krausemechanic) wrote:
>
> >> I didn't have the '48 QST, and I've been curious, it got
> >> a lot of recommentations in the 50's and 60's QSTs.
> >>
> >> I'm embarrased to admit that I was thinking of using a BC453 as a way to
> >> get RIT and cw filtering on my KWM-2...
> > >
>
> I guess I have to put my 2 cents in here. One of my favorite toys is a
> BC453 with an all band dual conversion converter ahead of it. I drag
> it out every couple of years and make a few modifications on it.
>
> I built it back in the 60s and keep improving it. It has amplified
> AGC, a product detector, side band selection and an S meter. Covers 5
> bands triple conversion, all with one 3.5 mhz crystal. Phone bands
> only.
>

That sounds pretty interesting. I've been thinking of homebrewing
a nostalgia receiver, and I haven't figured out an appealing way
to do the conversion oscillators. One crystal per band is easy,
but sort of expensive. I've wondered about using the harmonics
of one crystal for that purpose, which sounds like what you have
done. Could you say a little more about the conversion stragety?

> The selectivity is not bad. With the IFs set in the sharp mode I think
> the nose is around 2 kc. The skirts are ok, not real steep like a
> collins filter but adequate. It is more like a Drake 1A or 2A as far
> as selectivity goes. Stability is excellent. I do get some images
> pretty bad on some bands though. My first IF does not have enough
> selectivity. Some day I am going to add another IF transformer there.
>
> The audio quality is excellent on it. Of course I am using all new
> audio stages in it. 6V6 in the output.
>
> It will work pretty well as a CW filter behind the KWM2. Tuning it to
> 455 kc you will have a variable bandwidth filter! You can make the
> bandwidth as sharp as you want it by just tuning the main dial across
> the 455 kc IF in the KWM2. One side of the skirt will be the
> mechanical filter and the other side will be the 85 kc IF. Of course
> that side of the curve will not be quite as sharp as the mechanical

> filter side but it won't be bad.
>
> If you get creative and add a product detector and an agc circuit, you
> can feed the agc back to the KWM2.
>
> Be careful not to overdrive the product detector with too much 85 kc
> IF. I had that problem with my little receiver for a number of years
> until I figured out what was going on. With all the added gain from
> the converter and the already hot BC453 I had lots of IF gain. I
> copied the product detector from I think Stoners handbook. It turned
> out that the coupling capacitor he used was way too big and over drove
> the product detector. Works nice now.
>
> It is also easy to overdrive the IFs if the BC453 is fed from an
> amplified stage as it is pretty hot. That contributes to product
> detector overdrive.
>
> Have fun.
> Gary K4FMX

3979. Ailtech 7514 PANFI

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 17:28:59 UTC
From: g3pho@blueyonder.co.uk
Message-ID: <3ee604a1.21751519@news.blueyonder.co.uk>
Source record: 35002

I wonder if anyone has any information on the Ailtech 7415 Precision Automatic Noise Figure Indicator?

I've just obtained one and am using a Nore Noise Generator head with it, driven by the 28V o/p from the Ailtech. However I can't get the calibration control to work, to set the ENR compensation. The meter is hard over on the left hand side and adjustment of the calibration control has little effect.

If anyone has a manual or even just a circuit diagram I'd be much obliged.

Peter, G3PHO

www.g3pho.org.uk

3980. electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 17:33:53 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <ad5cev8949jnf91h9h3bokc2jh1ru4htmj@4ax.com>
Source record: 35003

Hi All,

I have been asked by a neighbour if I can build him a small device to allow him to monitor his chicken coupe when he is at home as he has had a lot of chickens stolen.

I have found a few designs on the net and am in the process of gathering parts. My question is this:

Is it possible to connect more than one microphone to the transmitter input circuit and will I need to make any alterations to the microphone input circuit for more than one electret insert to work correctly.

The guy would like to have more than one insert so he can monitor inside and outside the coupe!

Thanks for any hints etc...

73, Iain M0PCB

(replace no.spm in the email address to reply directly!)

3981. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 19:10:09 UTC
From: troglodite@aol.com
Message-ID: <20030610151009.05587.00000671@mb-m26.aol.com>
Source record: 35004

>
>Is it possible to connect more than one microphone to the transmitter
>input circuit and will I need to make any alterations to the
>microphone input circuit for more than one electret insert to work
>correctly.
>

It depends a little on the transmitter. Most very simple FM transmitters, if that is what you are using, have a single transistor audio gain stage. If you are using the electret microphones with the built-in FET, (They have a DC power pin) you will have plenty of signal to do a simple resistive mixer, just run each microphone audio through about a 22K resistor to the input of the transmitter. If your microphones do not have an active device built-in, (Only two terminals.) then you may be marginal on gain with this approach, but it is worth a try. If all else fails, you can add a gain stage to make up for the mixing loss. You may also find you want less gain on one of the microphones, in which case just make its resistor a little larger.

Doug Moore

3982. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 21:12:03 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <MPG.194fe97ac1fd642398968e@news-central.giganews.com>
Source record: 35005

In article <3ee5d0da$0$6715@echo-01.iinet.net.au>, richardh@iinet.net.au says...
> John
> Is it something to do with the PLL filter?. There is an RC network to VCC
> from memory as the loop filter

Sure seems like it. However, I replaced the loop filter components a couple of times, just to be sure. No effect.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3983. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 21:55:12 UTC
From: averyfineman@aol.com
Message-ID: <20030610175512.14458.00000167@mb-m02.aol.com>
Source record: 35006

In article <2c04c006.0306090334.3ec9394d@posting.google.com>,
brmadhukar@hotmail.com (Madhukar) writes:

> This is revisiting a problem I had posted earlier. For a GPS RFIC
>I have requirement of
>
>a) LPF with cutoff at 30MHz
>b) BPF with bandwidth of 8MHz at 15.42MHz
>
>both with I/O impedance 4K ohm. With this impedance the Inductor
>becomes very high valued. I had tried to reduce this impedance to
>approximately 2K ohms and developed the filter but could not get
>proper performance (a loss of 4dB - 6dB in performance). Both filters
>were elliptic. Tom Bruhns referred me to some transforms but it could
>not really help me in this case as the topology became more complex by
>applying this. I am however looking into this to see if some other
>configuration could be used with this transforms.

A 4 KOhm impedance at those frequencies is unrealizeable.

As was suggested, transformers at each end would work. With
a 9:1 turns ratio, the impedance transformation is 81:1. At a filter
impedance of 50 Ohms, those transformers would convert it to
about 4050 Ohms.

Small toroidal forms with powdered iron mix in the core suitable
for 6 to 60 MHz range will work. The windings can be done with
10 strands of enameled coil wire wrapped together and wound by
hand. An Ohmmeter can determine which strand is what from the
wire bunch. You still have to get the strands hooked up right. :-)

A 5-section Elliptic function, 1 db passband ripple, will yield an
A-sub-min of 69 db stopband rejection beyond first nulls.

If you need a sketch of both filters with 5% tolerance fixed
capacitors, let me know by private mail and I will scan it for you,
return it privately in JPG format.

Len Anderson
retired (from regular hours) electronic engineer person

3984. Re: Very high lperformance 2m SSB/CW tranxceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 22:00:04 UTC
From: la8ak.xnd@online.no
Message-ID: <3ee64aaf.180182219@news.online.no>
Source record: 35007

>J M Noeding wrote:

>> have had some request for LA6LCA's high performance 2m ssb/cw remote
>> controlled transceiver using unusual techniqes, so I've put the block
>> circuit diagram on my home page at
>> http://home.online.no/~la8ak/d12.htm
>>
although Mr & Mrs Mouse don't have much comments on this NG, I've
received very much comments from GW4DGU, SM5BSZ and other, and hope to
have the permission to bring the comments on my site later. As SM5BSZ
says it is always a good idea to forward discussions about problems
with modern receivers

It is also general problems with receivers mentioned, the Linrad is
also discussed in some details

73
Jan-Martin
LA8AK

3985. Norcal 30 Status??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 23:10:48 UTC
From: Dick <boleyd@yahoo.com>
Message-ID: <YztFa.743$Hw.933122@news2.news.adelphia.net>
Source record: 35008

Does anyone have any news concerning the Norcal-30 transceiver kit??

Dick N3HKN

3986. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 23:39:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vecr2gtael0f92@corp.supernews.com>
Source record: 35009

I'd use a low frequency ferrite core rather than powdered iron for the transformers. The phase angle of the winding impedance isn't important, just the magnitude. Low frequency ferrites will give you a lot more impedance over the HF range than powdered iron -- the largely resistive nature of the impedance is inconsequential and, because of relative frequency independence and immunity to resonances, often desirable. Commonly available type 43 material or equivalent is a good choice for the upper part of the HF range. You'll get a relatively constant winding impedance over a wide frequency range, and a much greater impedance at lower frequencies than you would with a powdered iron core.

Unfortunately, the transformer solution isn't a viable one for the LPF. Unless someone can think up another solution that works down to DC, or you can tolerate some low frequency cuttoff in your LPF, you're stuck with living in the 4K ohm world. For that I can make a couple of suggestions.

The first is to take another look at the possible transformations. There are usually quite a number of different ones you can use. Look for topologies where you can absorb the unavoidable parasitics. For example, if you're stuck with 2 pF of stray C to ground at some point, look for a topology that requires 2 pF or more of C to ground at that point -- you get the idea.

The second is to look at how circuits were designed and built in the vacuum tube days. They used to routinely deal with high impedances, and developed techniques to accommodate them -- electric field shielding, special inductor winding techniques, ceramic insulation(*), and so forth. In today's low impedance solid state world, these techniques are usually inappropriate, so they've largely been forgotten. But it's the world you may have to deal with, so it would be worthwhile to see how it was done.

Roy Lewallen, W7EL

(*) Actually, in modern times, PTFE (Teflon) is a much better insulation choice than ceramic for many high-Z applications. Because of its low dielectric constant of about 2, it'll produce a lot less parasitic capacitance than alumina, the most common ceramic, with its dielectric constant of about 10.

Avery Fineman wrote:
> In article <2c04c006.0306090334.3ec9394d@posting.google.com>,
> brmadhukar@hotmail.com (Madhukar) writes:
>
>

>> This is revisiting a problem I had posted earlier. For a GPS RFIC
>>I have requirement of
>>
>>a) LPF with cutoff at 30MHz
>>b) BPF with bandwidth of 8MHz at 15.42MHz
>>
>>both with I/O impedance 4K ohm. With this impedance the Inductor
>>becomes very high valued. I had tried to reduce this impedance to
>>approximately 2K ohms and developed the filter but could not get
>>proper performance (a loss of 4dB - 6dB in performance). Both filters
>>were elliptic. Tom Bruhns referred me to some transforms but it could
>>not really help me in this case as the topology became more complex by
>>applying this. I am however looking into this to see if some other
>>configuration could be used with this transforms.
>
>
> A 4 KOhm impedance at those frequencies is unrealizeable.
>
> As was suggested, transformers at each end would work. With
> a 9:1 turns ratio, the impedance transformation is 81:1. At a filter
> impedance of 50 Ohms, those transformers would convert it to
> about 4050 Ohms.
>
> Small toroidal forms with powdered iron mix in the core suitable
> for 6 to 60 MHz range will work. The windings can be done with
> 10 strands of enameled coil wire wrapped together and wound by
> hand. An Ohmmeter can determine which strand is what from the
> wire bunch. You still have to get the strands hooked up right. :-)
>
> A 5-section Elliptic function, 1 db passband ripple, will yield an
> A-sub-min of 69 db stopband rejection beyond first nulls.
>
> If you need a sketch of both filters with 5% tolerance fixed
> capacitors, let me know by private mail and I will scan it for you,
> return it privately in JPG format.
>
> Len Anderson
> retired (from regular hours) electronic engineer person

3987. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-10 23:58:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3ee66d5f.189063981@news.online.no>
Source record: 35010

On 10 Jun 2003 09:30:44 -0700, sw@ai.mit.edu (Sandy Wells) wrote:

>
>That sounds pretty interesting. I've been thinking of homebrewing
>a nostalgia receiver, and I haven't figured out an appealing way
>to do the conversion oscillators. One crystal per band is easy,
>but sort of expensive. I've wondered about using the harmonics
>of one crystal for that purpose, which sounds like what you have
>done. Could you say a little more about the conversion stragety?
>
>
probably the best thing you could do is copying the 2-B in a way by
starting with a 3.5-4MHz receiver. But remember that what was the most
efficient cost-effective design for Drake isn't optimum for you.
A Japanese copy of the Drake 2-B is supposed to be Star SR-400(?), but
it had a bad reputation and probably couldn't compare with the
performance you had with the 2-B.
In the 1960-70's the japs copied techniques from Heath and other
manufacturers, but often seem to have misunderstood important rules.

So I would use 455kHz IF, but avoid 50kHz if you can't make adequate
selectivity on 455kHz in some simple stages for the next conversion,

instead have 455kHz as the final IF with modern ceramic filters

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/d12.htm

3988. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 02:19:49 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0306101819.7b7503d8@posting.google.com>
Source record: 35011

troglodite@aol.com (Troglodite) wrote in message
news:<20030610151009.05587.00000671@mb-m26.aol.com>...
> >
> >Is it possible to connect more than one microphone to the transmitter
> >input circuit and will I need to make any alterations to the
> >microphone input circuit for more than one electret insert to work
> >correctly.
> >
>
> It depends a little on the transmitter. Most very simple FM transmitters, if
> that is what you are using, have a single transistor audio gain stage. If you
> are using the electret microphones with the built-in FET, (They have a DC power
> pin) you will have plenty of signal to do a simple resistive mixer, just run
> each microphone audio through about a 22K resistor to the input of the
> transmitter. If your microphones do not have an active device built-in, (Only
> two terminals.) then you may be marginal on gain with this approach, but it is
> worth a try. If all else fails, you can add a gain stage to make up for the
> mixing loss. You may also find you want less gain on one of the microphones, in
> which case just make its resistor a little larger.
>
> Doug Moore

Also, if you had a STEREO transmitter, you could just simply use a mic
for each channel.(2)

3989. polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 02:57:47 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ved6leccbh8391@corp.supernews.com>
Source record: 35012

Some time ago I recall seeing an article using a polarized electrolyic capacitor as a non-polarized by connecting it to a full wave bridge rectifier. Anyone recall where I might have seen this and has anyone had any success with this trick?
tnx
hank wd5jfr

3990. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 03:02:36 UTC
From: Floyd Davidson <floyd@barrow.com>
Message-ID: <871xy1e2pf.fld@barrow.com>
Source record: 35013

la8ak.xnd@online.no (J M Noeding) wrote:
>On 10 Jun 2003 09:30:44 -0700, sw@ai.mit.edu (Sandy Wells) wrote:
>
>
>>
>>That sounds pretty interesting. I've been thinking of homebrewing
>>a nostalgia receiver, and I haven't figured out an appealing way
>>to do the conversion oscillators. One crystal per band is easy,
>>but sort of expensive. I've wondered about using the harmonics
>>of one crystal for that purpose, which sounds like what you have
>>done. Could you say a little more about the conversion stragety?
>>
>>
>probably the best thing you could do is copying the 2-B in a way by
>starting with a 3.5-4MHz receiver. But remember that what was the most
>efficient cost-effective design for Drake isn't optimum for you.
>A Japanese copy of the Drake 2-B is supposed to be Star SR-400(?), but
>it had a bad reputation and probably couldn't compare with the
>performance you had with the 2-B.
>In the 1960-70's the japs copied techniques from Heath and other
>manufacturers, but often seem to have misunderstood important rules.
>
>So I would use 455kHz IF, but avoid 50kHz if you can't make adequate
>selectivity on 455kHz in some simple stages for the next conversion,
>
>instead have 455kHz as the final IF with modern ceramic filters

Rather than copy the 2B, I'd look very carefully at the R4C
design, and all of the various modifications that were later
done to make up for implementation flaws (read that as
"economies").

The 2B got its selectivity at 50kHz with a tunable passband
filter that is not something anybody wanted to try at home in
those day, and still isn't! The R4C uses a conversion technique
to provide passband tuning that works very well and is easy to
implement.

The problems with the R4C design are no different than with any
other triple conversion receiver that gets its selectivity too
far down the IF chain. There are loads of good write-ups
available on the Internet, and a google search will turn up
everything one needs.

--
Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

3991. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 06:03:13 UTC
From: averyfineman@aol.com
Message-ID: <20030611020313.12501.00000122@mb-m04.aol.com>
Source record: 35014

In article <vecr2gtael0f92@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>I'd use a low frequency ferrite core rather than powdered iron for the
>transformers. The phase angle of the winding impedance isn't important,
>just the magnitude. Low frequency ferrites will give you a lot more
>impedance over the HF range than powdered iron -- the largely resistive
>nature of the impedance is inconsequential and, because of relative
>frequency independence and immunity to resonances, often desirable.
>Commonly available type 43 material or equivalent is a good choice for
>the upper part of the HF range. You'll get a relatively constant winding
>impedance over a wide frequency range, and a much greater impedance at
>lower frequencies than you would with a powdered iron core.

Roy, no offense, but I've found out (about 20 years ago) that
powdered iron cores can work out just fine and better than
ferrite over the frequency ranges mentioned.

One trick to keep bandwidth wide is to bunch up ALL strands
of wire into a mini-cable, whether 3 strands for a 1:4 or 8 for a
1:49 transformer. The length of the bunched strands should be
at least a quarter wavelength at the highest part of the frequency
range. The toroid core material will handle coupling at the lower
frequencies. A hand drill can do the bunching/bundling of strands.

The test is to accurately measure the transformer characteristics
once done. Few bother with the test...it's wind and go.

>Unfortunately, the transformer solution isn't a viable one for the LPF.

Why not? We don't know yet what the lower bound of the
LPF really has to be, do we? The assumption is that it "goes
to DC." It may not.

Obviously a transformer will NOT go to DC. :-)

But, the bandpass filter does NOT go to DC. A conventional BPF
with Elliptic function response would be a lovely short to the
driving circuit. Doesn't really matter what the "impedance" of the
BPF is below half the lower-side cutoff frequency.

>Unless someone can think up another solution that works down to DC, or
>you can tolerate some low frequency cuttoff in your LPF, you're stuck
>with living in the 4K ohm world. For that I can make a couple of
>suggestions.

No, I won't accept being "stuck with 4K Ohms." It would be best
to examine the driving circuit and the load end circuit to find out
if the impedances CAN be lowered...at least to 200 Ohms or less.

>The first is to take another look at the possible transformations. There
>are usually quite a number of different ones you can use. Look for
>topologies where you can absorb the unavoidable parasitics. For example,
>if you're stuck with 2 pF of stray C to ground at some point, look for a
>topology that requires 2 pF or more of C to ground at that point -- you
>get the idea.

Do some numbers of the frequencies given and the given Z.
Capacitors will come out to a few femtoFarads for an Elliptic.
Some of the inductors would be several microHenries and
probably have distributed capacitance beyond the Elliptic
null resonating capacitors.

>The second is to look at how circuits were designed and built in the
>vacuum tube days. They used to routinely deal with high impedances, and
>developed techniques to accommodate them -- electric field shielding,
>special inductor winding techniques, ceramic insulation(*), and so
>forth. In today's low impedance solid state world, these techniques are
>usually inappropriate, so they've largely been forgotten. But it's the
>world you may have to deal with, so it would be worthwhile to see how it
>was done.

That won't hurt for a general knowledge base.

[yes, I DO remember the Tektronix 545 scope big L-shaped delay
line with several dozen little trimmers along the way...:-)]

The original request was for a LPF and a BPF, both preferrably
Elliptic function in response. We don't know the lower bound of
the LPF as far as application is concerned. We do know the
bounds of passband of the BPF in the region of 6 to 20 MHz
or so. We don't know if a linear group delay characteristic is
needed...which it might to preserve GPS pulse fidelity.

A toroidal transformer can be made with powdered iron core
that can go down to 1 MHz and up beyond 30 MHz at least to
a 1:49 Z step-up/step-down in a 1-inch OD toroidal core. I've
done it. A 1:81 Z change should be realizeable, too, but the
core OD might need to be larger than an inch just to hand-
wind the thing.

Len Anderson
retired (from regular hours) electronic engineer person

3992. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 07:50:50 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ee6dea0.1152119@news.freeserve.net>
Source record: 35015

On Tue, 10 Jun 2003 21:57:47 -0500, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>Some time ago I recall seeing an article using a polarized electrolyic
>capacitor as a non-polarized by connecting it to a full wave bridge
>rectifier. Anyone recall where I might have seen this and has anyone had
>any success with this trick?
>tnx
>hank wd5jfr
>
>
I have used two polarised electrolytics in series 'back to back' to
produce a non polarised device. It appeared to work. In fact its still
working in my rotator controller.
I would think that the bridge idea would not be too good due to the
voltage drop on the bridge, if in fact it would work at all.
I'll watch this thread with interest.
atb Mike W, G8NXD

3993. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 09:16:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vedssk3boq8hba@corp.supernews.com>
Source record: 35016

I've also made a non-polarized electrolytic with back-to-back polarized ones, with the addition of a diode across each one to limit the reverse voltage to a diode drop. (Otherwise you're depending on the capacitor to be much leakier when reverse voltage is applied than when forward voltage is applied.) However, I'd hesitate to pull this trick if reliability was important. And I'd never do it with tantalum electrolytics. Even a very small reverse voltage greatly increases the failure rate of tantalum capacitors. Modern aluminum electrolytics are pretty different from their older, larger predecessors, and I don't know how tolerant they are of reverse voltage. I'd probably still use the back-to-back trick with aluminum electrolytics for a one-off project, but not if reliability was important. Zero reverse voltage would be a more prudent goal.

You can of course purchase non-polarized electrolytics which are roughly twice the size of their polarized counterparts. I don't know how they're constructed. If anyone does know, I'd be interested in learning.

Roy Lewallen, W7EL

Mike W wrote:
> On Tue, 10 Jun 2003 21:57:47 -0500, "Henry Kolesnik"
> <wd5jfr@oklahoma.net> wrote:
>
>
>>Some time ago I recall seeing an article using a polarized electrolyic
>>capacitor as a non-polarized by connecting it to a full wave bridge
>>rectifier. Anyone recall where I might have seen this and has anyone had
>>any success with this trick?
>>tnx
>>hank wd5jfr
>>
>>
>
> I have used two polarised electrolytics in series 'back to back' to
> produce a non polarised device. It appeared to work. In fact its still
> working in my rotator controller.
> I would think that the bridge idea would not be too good due to the
> voltage drop on the bridge, if in fact it would work at all.
> I'll watch this thread with interest.
> atb Mike W, G8NXD

3994. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 13:44:39 UTC
From: troglodite@aol.com
Message-ID: <20030611094439.28409.00000299@mb-m13.aol.com>
Source record: 34897

>Some time ago I recall seeing an article using a polarized electrolyic
>capacitor as a non-polarized by connecting it to a full wave bridge
>rectifier. Anyone recall where I might have seen this and has anyone had
>any success with this trick?

While this sounds sort of right, it does not work. The capacitor simply charges up until on all following cycles the diodes are reverse biased. Think about it.

The two electrolytics in series with reverse charge shunting diodes works, but the life expectancy of the electrolytics is considerably shortened.

Your best bet is a true non-polar, like a motor starting capacitor.

Doug Moore

3995. need rotor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 16:45:49 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <11JFa.156458$VP.38045808@twister.neo.rr.com>
Source record: 34898

I have an old CDE BT-1 rotor and the control box has a comparator chip with the house number
51238-00A.
Has anyone every found a common replacement for this chip or have a pin out of it?
Tnx, Richard WB8KRN

3996. Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 17:14:55 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <mazEWMFPO25+Ewsr@philstheboss.freeserve.co.uk>
Source record: 34899

I am searching without much luck for data sheets on two Motorola
devices:

2N6166 and 2N6166S

They have 1986 date codes.

I am trying to find exactly what difference there is between the above
together with typical operating parameters.

Many thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3997. HF multiband antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 18:55:19 UTC
From: Bizon <bizongod@poczta.fm>
Message-ID: <bcd4mbbtu2@atlantis.news.tpi.pl>
Source record: 34927

Hi!
I'm looking for description (how to fo) of
veritcal HF multiband antenna. How it's
only possible many bands. Have You?

Thanks
Karol

3998. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 21:33:01 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <rs7fevkcn3fdl9pkjb4l5ojk44ngo4hfvc@4ax.com>
Source record: 34900

On 10 Jun 2003 19:10:09 GMT, troglodite@aol.com (Troglodite) wrote:

>>
>>Is it possible to connect more than one microphone to the transmitter
>>input circuit and will I need to make any alterations to the
>>microphone input circuit for more than one electret insert to work
>>correctly.
>>
>
>It depends a little on the transmitter. Most very simple FM transmitters, if
>that is what you are using, have a single transistor audio gain stage. If you
>are using the electret microphones with the built-in FET, (They have a DC power
>pin) you will have plenty of signal to do a simple resistive mixer, just run
>each microphone audio through about a 22K resistor to the input of the
>transmitter. If your microphones do not have an active device built-in, (Only
>two terminals.) then you may be marginal on gain with this approach, but it is
>worth a try. If all else fails, you can add a gain stage to make up for the
>mixing loss. You may also find you want less gain on one of the microphones, in
>which case just make its resistor a little larger.
>
>Doug Moore

Thanks for the reply Doug,

Yes it is a just a simple FM transmitter and from what the description
says the audio seems to be amplified by a single transistor.

I don't have the parts yet so I can easily get the capsules with a
built-in FET if they will be a better option.

Again thanks for the reply, very useful...

Cheers,

73, Iain M0PCB

3999. Re: how selective bc453 (Q5'er)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-11 22:02:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3ee7a650.269188549@news.online.no>
Source record: 34901

On 10 Jun 2003 19:02:36 -0800, Floyd Davidson <floyd@barrow.com>
wrote:

>la8ak.xnd@online.no (J M Noeding) wrote:
>>On 10 Jun 2003 09:30:44 -0700, sw@ai.mit.edu (Sandy Wells) wrote:
>>
>>
>>>
>>>That sounds pretty interesting. I've been thinking of homebrewing
>>>a nostalgia receiver, and I haven't figured out an appealing way
>>>to do the conversion oscillators. One crystal per band is easy,
>>>but sort of expensive. I've wondered about using the harmonics
>>>of one crystal for that purpose, which sounds like what you have
>>>done. Could you say a little more about the conversion stragety?
>>>
>>>
>>probably the best thing you could do is copying the 2-B in a way by
>>starting with a 3.5-4MHz receiver. But remember that what was the most
>>efficient cost-effective design for Drake isn't optimum for you.
>>A Japanese copy of the Drake 2-B is supposed to be Star SR-400(?), but
>>it had a bad reputation and probably couldn't compare with the
>>performance you had with the 2-B.
>>In the 1960-70's the japs copied techniques from Heath and other
>>manufacturers, but often seem to have misunderstood important rules.
>>
>>So I would use 455kHz IF, but avoid 50kHz if you can't make adequate
>>selectivity on 455kHz in some simple stages for the next conversion,
>>
>>instead have 455kHz as the final IF with modern ceramic filters
>
>Rather than copy the 2B, I'd look very carefully at the R4C
>design, and all of the various modifications that were later
>done to make up for implementation flaws (read that as
>"economies").
>
>The 2B got its selectivity at 50kHz with a tunable passband
>filter that is not something anybody wanted to try at home in
>those day, and still isn't! The R4C uses a conversion technique
>to provide passband tuning that works very well and is easy to
>implement.
>
>The problems with the R4C design are no different than with any
>other triple conversion receiver that gets its selectivity too
>far down the IF chain. There are loads of good write-ups

>available on the Internet, and a google search will turn up
>everything one needs.
>
>--
>Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
>Ukpeagvik (Barrow, Alaska) floyd@barrow.com

Hi

sorry, I don't have the faintest idea about your skill and ressources,
but I would suppose it is difficult and not very easy to build a
design as it was done in 1961-62 when the late 2-A and 2-B were
designed, and it is much more difficult to find the components today,
but most important is to understand all the different features and
tricks and understand why it is just done as it is, so I can't
recommend you to do it although it may be an easy task for somebody

73
jan-martin

4000. Re: 4K filter at 15.42MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 04:24:17 UTC
From: brmadhukar@hotmail.com
Message-ID: <2c04c006.0306112024.da52cbf@posting.google.com>
Source record: 34902

Hi,
Thanks all for providing much information. I am basically an "elctronics - engineer" who worked on lot of software and recently coming back to "electronics" like designing Circuits, Mixed-signal PCBs ... . I am not aware how transformer is wound for RF and what size these shall be. Do let me know where I can look for such information.

With circuit in hand, I chose Elliptic over other configuarations as it has steeper skirts. The Phase is fairly linear and the actual implementation is also supposed to have same characteristic. Now I am not sure whether it can in practice be maintained.

BR
Madhukar

4001. Re: need rotor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 10:19:03 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ee8534f.1576909@news.freeserve.net>
Source record: 34905

On Wed, 11 Jun 2003 16:45:49 GMT, "Richard Heindel"
<rheindel@neo.rr.com> wrote:

>I have an old CDE BT-1 rotor and the control box has a comparator chip with the house
number
>51238-00A.
>Has anyone every found a common replacement for this chip or have a pin out of it?
>Tnx, Richard WB8KRN
>
>
I think I replaced it with a 741, but its been many years since I did
this so better check the pinouts.
hth Mike W, G8NXD aka M3MSM qthr

4002. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 12:01:10 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <8iqgevomhoaetg37j03raoc1pqq6dshb3u@4ax.com>
Source record: 34906

On Thu, 12 Jun 2003 18:20:34 +0100, "paul.g7izx"
<paul.g7izx@ntlworld.com> wrote:

Hi Paul,

>HI
>If the person has electric in his shed .
>it might be better using an intercom , & wire

I think there is electric in there, batteries would run out quite
quickly if it's transmitting all the time.

>or depending on how far away the house it
>he could use a video sender , with just a
>microphone plugged in , you then can monitor it on his TV

The house is about 300M from the shed line of sight and the budget is
very tight. He is retired and lives alone.

>How about just a pair of baby intercoms , that work on mains .
>(ie) the type that TX up the mains cable .

Not sure if the house and shed will be on the same mains line. The
village is split into two, as can be seen when half the village loses
power and the other half doesn't!

>and depending on how much he wants to pay .
>how about a video link , a 2.4ghz video senders
>the transmitter , with a b/w camera fitted to it , and a microphone
>in the shed , the receiver at home .
>and he would be able to watch and listen from his home
>again all depends on how much he wants to pay
>and how far away from the shed he is .

I think the camera idea, although a good one, is a bit ott for the
purpose, and can get expensive. It's too far to run a cable so I think
wireless is the way to go.

>- so don't jump straight in , there are many options that
>can be explored , either by building something or by
>buying something straight off the sheld , or modifying
>an existing items .

I've seen a few designs for little radio transmitters that are quite
cheap to make, and offer a more versatile approach, with the ability
for more than one microphone etc...

>make life easy for your self .

I'm trying!! Now to gather some bits together I think and give this little circuit a go.

Thanks for the reply...

73, Iain M0PCB

4003. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 12:05:46 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <bsqgevcnh2bvm3u9va2rdfprt7t74cju6q@4ax.com>
Source record: 34907

Whilst on the subject of Electret Microphones.... (again!)

I posted a topic a short while ago asking about electret microphones which resulted in my receiving a couple of replacements from a kind gentleman in scotland.

I have replaced the insert on the hands free kit and even though it worked the first time I tried it on the rig it has stopped working.

The insert is fine, as are the connections between mic. and radio. One thing I have noticed is that the +8V from the set is feeding into the 'box of tricks' which is then sending about +4.5V up to the mic insert. However when I connect the mic insert to the mic line the voltage drops to about +1.8V and there is no audio.

The insert only has two connections on the back, the same as the one that came out but it seems to be dropping the voltage by a considerable amount.

I can only guess as to why this is as my knowledge of these microphones is very limited. I was wondering if someone may be able to shed some light on this?

Cheers,

Iain M0PCB

4004. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 12:16:58 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <phgGa.7467$Cm5.3567356@newsfep2-win.server.ntli.net>
Source record: 34920

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:ved6leccbh8391@corp.supernews.com...
> Some time ago I recall seeing an article using a polarized electrolyic
> capacitor as a non-polarized by connecting it to a full wave bridge
> rectifier. Anyone recall where I might have seen this and has anyone had
> any success with this trick?
> tnx
> hank wd5jfr
==========
A bridge rectifier is a full wave rectifier ,hence its output is polarised.
If a capacitor is required in an AC circuit a polarised capacitor in the
polarised output of a bridge rectifier becomes a non-polarised capacitor for
the AC circuit.
However the electrolytic polarised capacitor is always is series with 2
diodes ,resulting in a voltage drop of approx 1.4 V
If that is acceptable ,the circuit should work.

Frank GM0CSZ / KN6WH

4005. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 13:34:37 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.null>
Message-ID: <MPG.195221448d62e7e69898f5@192.168.42.131>
Source record: 34908

In article <mazEWMFPO25+Ewsr@philstheboss.freeserve.co.uk>,
Philstheboss@thebbc.fslife.co.uk says...

> I am searching without much luck for data sheets on two Motorola
> devices:
>
> 2N6166 and 2N6166S

<snip>

It obviously did not occur to you to plug those numbers into
Google.

http://www.americanmicrosemi.com/products/specs/2N6166.phtml

I didn't find anything on the 6166S. However, it has been my
experience in the past that parts with letters after their numbers like
that often indicate that the part is certified to be usable in specific
(and sometimes critical) applications, such as biomedical or space.

In any case, the 6166 appears to be a mil-spec RF transistor, NPN,
and not particularly cheap either. I saw some Google entries for it with
prices in the USD $80 range.

Good hunting.

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

4006. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 14:46:28 UTC
From: "L." <Tech@DP.NET>
Message-ID: <bca3ob$881$1@news.dp.net>
Source record: 34909

"Dr. Anton Squeegee" <SpammersAreVermin@dev.null> wrote in message
news:MPG.195221448d62e7e69898f5@192.168.42.131...
> In article <mazEWMFPO25+Ewsr@philstheboss.freeserve.co.uk>,
> Philstheboss@thebbc.fslife.co.uk says...
>
> > I am searching without much luck for data sheets on two Motorola
> > devices:
> >
> > 2N6166 and 2N6166S
>
> <snip>
>
> It obviously did not occur to you to plug those numbers into
> Google.
>
> http://www.americanmicrosemi.com/products/specs/2N6166.phtml
>

Maybe it didn't occur to him/her as the case may be because they aren't that familiar with all the things that can be done online. You can't assume ALL know about google or any other sites for that matter. Just because people get online, doesn't make them computer whizzes or know of every site to be had. People got to lighten up. Why not just answer the question without getting an attitude. They asked a question, not to be insulted. Man, some people sure don't make computer use, user friendly.

"I" do have info on a 2N6166 but not the "S".

It is a 100 watt RF Power Transistor rated at 150 MHz..
NPN Silicon
Designed for VHF Power amplifier applications in military and industrial equipment. Particularly suited for Class AB, B or C amplifier applications up to 200 MHz.

Specified for 28 VDC, 150 MHz
Output Power 100 Watts
Min. Gain 6.0 dB
Eff. 60%

Specified for 13.5 VDC, 150 MHz
Output Power 30 Watts
Min. Gain 4.5 dB

Parallel Impedance Characterization

Max ratings:
VCEO 35 VDC
VCBO 65 VDC
VEBO 4.0 VDC
IC 9.0 ADC
PD 117 WATTS - 0.667 W/DEGREES C.
TSTG (storage temp) -65 TO +150 DEGREES C.

ALL the above comes right out of a Motorola Semiconductor Handbook. There is much more, like graphs and such, but this should answer most of the questions relating to usage and ratings.

L.

4007. ICOM2100H/HM-95

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 15:51:21 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Zj1Ga.963190$Zo.218989@sccrnsc03>
Source record: 34910

I have an HM-95 DTMF mike used with the ICOM 2100H. I want to use the mike in another application, and have the microphone connector wiring diagram.

Applying the 8 volts for the DTMF chip, does not bias the mike element. Adding an external resistor to bias the element, I get audio from the mike, but it kills the DTMF tones.

Anyone with the schematic for the audio input stages for the 2100H ? I'd appreciate a .PDF or a .JPG or even a hand sketch of how in heck they use the thing.

TIA.
W4ZCB

4008. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 17:20:34 UTC
From: "paul.g7izx" <paul.g7izx@ntlworld.com>
Message-ID: <IfXFa.5640$Cm5.2838327@newsfep2-win.server.ntli.net>
Source record: 34903

HI
If the person has electric in his shed .
it might be better using an intercom , & wire

or depending on how far away the house it
he could use a video sender , with just a
microphone plugged in , you then can monitor it on his TV

How about just a pair of baby intercoms , that work on mains .
(ie) the type that TX up the mains cable .

and depending on how much he wants to pay .
how about a video link , a 2.4ghz video senders
the transmitter , with a b/w camera fitted to it , and a microphone
in the shed , the receiver at home .
and he would be able to watch and listen from his home
again all depends on how much he wants to pay
and how far away from the shed he is .

- so don't jump straight in , there are many options that
can be explored , either by building something or by
buying something straight off the sheld , or modifying
an existing items .

make life easy for your self .

hope the info helps .

de Paul

"Iain Kelly" <no.spam@m0pcb.co.uk> wrote in message
news:ad5cev8949jnf91h9h3bokc2jh1ru4htmj@4ax.com...
> Hi All,
>
> I have been asked by a neighbour if I can build him a small device to
> allow him to monitor his chicken coupe when he is at home as he has
> had a lot of chickens stolen.
>
> I have found a few designs on the net and am in the process of
> gathering parts. My question is this:
>
> Is it possible to connect more than one microphone to the transmitter
> input circuit and will I need to make any alterations to the
> microphone input circuit for more than one electret insert to work
> correctly.
>
> The guy would like to have more than one insert so he can monitor

> inside and outside the coupe!
>
> Thanks for any hints etc...
>
> 73, Iain M0PCB
>
> (replace no.spm in the email address to reply directly!)

4009. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 17:41:10 UTC
From: "paul.g7izx" <paul.g7izx@ntlworld.com>
Message-ID: <_yXFa.5690$Cm5.2842593@newsfep2-win.server.ntli.net>
Source record: 34904

HI THERE .

FIRST OF CHECK OUT

http://www.surplussales.com/Manuals/man_kenwood.html
FOR YOUR KENWOOD MANUALS

****
Now I wonder if you have the same problem as some of the older Kenwood
ts440s ? , Some of the older ts440s used to have a problem with the display
, and the keypad operations on the front panel , sounds familiar !!

In brief it seemed to be caused by some sort of protective coating
that was applied to the circuit board , when it got old it would
change its proprieties , and used to absorb moisture
then it would caused a similar problem to what you have
simply because the CPU and the rest of the circuit needs to run at precise
voltages and frequencies , this coating when it was old used to
alter the capactience's and resistances and frequencies of tuned
circuits , and the CPU used to Un-Lock then it used to cause problems

((((check out ts440-faults for a more detailed explanation than , I have
given))).

hope the info helps

direct email to >>>> g7izx.paul@ntlworld.com

hope you get it sorted .
de Paul

"Alex" <ve3leg@hotmail.com> wrote in message
news:3EDCCB0A.40205@hotmail.com...
> I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
> CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
>
>
> Someone sugested that the CPU supply voltage might be the problem, I
> measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
> or 6V but not between. I need to know what the needed VCC for the chip
> is so I know if I have to replace a regulator somewhere or add a zener
> or if I'm on the wrong track.
>
>
>
> Alex
> VE3LEG

>

4010. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 18:37:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vehi41q6t4tm18@corp.supernews.com>
Source record: 34911

Dr. Anton Squeegee wrote:
> I didn't find anything on the 6166S. However, it has been my
> experience in the past that parts with letters after their numbers like
> that often indicate that the part is certified to be usable in specific
> (and sometimes critical) applications, such as biomedical or space.

I've seen a designation like this used to denote a part that's selected or more tightly specified, which is along the lines of what you've seen. A large equipment manufacturer might have a need for a transistor with all the specs of a 2N6166, but, say, a particularly high hfe for a particular application. They pay the transistor manufacturer to sort parts and furnish them with only ones having a sufficiently high hfe.

Consequently, I think it would be safe to assume that the 2N6166S meets all the specs of a 2N6166. But there's probably no way to tell in what way it might be special, unless you have access to the internal specifications of the company that ordered it.

Roy Lewallen, W7EL

4011. Re: Cheap Dual Gate Mosfet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 19:29:36 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3EE8D495.41C62341@earthlink.net>
Source record: 34912

Michael Black wrote:
>
> Doug (janaeanddoug@netzero.net) writes:
> > Does anyone know of a cheap substitute for the 40673 dual gate mosfet?
> > The 40673 is going for $8 or better if you can find them at all.
> > Thanks, Doug N0WVA
>
> I think Dan's Small parts still has some various types of MOSFETs.
> http://www.fix.net/dans.html
>
> A few years back, I found at a dollar store RF preamps for the FM
> band, intended for auto use. Curious, I bought one and brought it
> home. It had a MOSFET inside, I think a 3N200. Since it was only
> a dollar, I went back and bought all that were left. I don't know
> if that was a lucky find or not, though the specific unit looked
> like something Radio Shack was selling. I've yet to get around to
> trying them, to see if they are any good.
>
> I think some TV tuners use MOSFETs, though I'm not familiar enough
> with them to know how common or in what tuners or TV sets. Considering
> it's easy to pull tuners out of TV sets waiting for the garbage, that
> might be a source of MOSFETs.
>
> I have a number of Delco digitally tuned car radios, and they have
> a significantly looking transistor for the FM RF stage. I guess
> I didn't bother tracing the circuit because it seemed a shame to
> even consider scrapping them. But if it is a MOSFET, that might
> be a way of getting some MOSFETs, since these are pretty common radios
> and I've picked them up for five dollars at garage sales and even found
> some in the garbage.
>
> Other than that, I can't think of common consumer items that used MOSFETs,
> limiting their availability in scrap equipment.
>
> Michael VE2BVW

I used to buy the 40673 25 at a time to repair garage door openers in
the '80s and '90s. I think they were used in the "Overhead Door
Company" brand of receiver. Lots of the old units must be coming out of
service, so you might ask people who do garage doors for their dead
receivers. The most common failure was a shorted power diode, open
electrolytic, and a burnt resistor, but the MOSFET was still good.
There is a "Overhead Door Company dealer in Ocala that i will check when
i get a chance. I salvaged piles of 6CW4 nuvistors and 6DJ8s out of the

dead tube receivers, and used them to repair a lot of old equipment,
too.
--

Michael A. Terrell
Central Florida

4012. Re: need rotor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 19:43:36 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <IJ4Ga.170643$VP.39065333@twister.neo.rr.com>
Source record: 34913

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3ee8534f.1576909@news.freeserve.net...
| On Wed, 11 Jun 2003 16:45:49 GMT, "Richard Heindel"
| <rheindel@neo.rr.com> wrote:
|
| >I have an old CDE BT-1 rotor and the control box has a comparator chip with the house number
| >51238-00A.
| >Has anyone every found a common replacement for this chip or have a pin out of it?
| >Tnx, Richard WB8KRN
| >
| >
| I think I replaced it with a 741, but its been many years since I did
| this so better check the pinouts.
| hth Mike W, G8NXD aka M3MSM qthr

Well Mike that's something I'm looking for, a pin out of the CDE chip. Do you have one lying around that you could
email me???

73 Richard WB8KRN

4013. Great new forum about the Famous Granade SW transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 20:53:51 UTC
From: "Alfred Zoer (A*L*I)" <alinter@alwaysaccess.nl>
Message-ID: <bcap90$n1f$1@hermes.castel.nl>
Source record: 34914

Great new forum about the Famous Granade SW transmitter

New. A new forum only related to the Famous Granade Transmitter.
The widely known short-wave transmitter used by many world wide.
Still it seems it is getting improved every month as there is always someone
that has added something new.
Get and create information in this forum witch is related to the electronics
and transmitter group.
check it out here
http://www.alfalima.net/cgi-bin/teemz/teemz.cgi?board=_master&forum=The_Famo
us_Granade_Transmitter
and join up and start posting and reading!! and ad your questions.
we promote this bigtime so hopefully huge pile of people will join

4014. Re: need datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-12 22:05:32 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EE8F92C.5040406@hotmail.com>
Source record: 34915

Status report:

The radio changing frequency for no reason has been solved, it was a
short circuit in the microphone.

The radio not turning on is solved, sort of. The radio refuses to turn
on when it's supply voltage is over 12V DC, even though the manual says
13.8V +- 15%. I turned down the supply voltage to 12V and it turns on
90% of the time.

The keypad works perfectly now that the supply voltage is turned down.

The radio still dies about 25% of the time when I press the keypad to
enter a frequency, but I've found that if I finish entering the
frequency and turn the radio off and on again or hit transmit the radio
comes back to life.

The radio does not transmit on low power, I only get about 5mW out of
it on low when it's supposed to output 5W, on high I get 15W instead of
the expected 20W.

The radio's receiver works well, and two pleasant QSO's on a local
repeater tell me that the transmitter sounds good on high.

So the radio as gone from dead to really quirky. Any more ideas/help?

Thanks.

73,
Alex
VE3LEG

Andrew VK3BFA wrote:
> Alex <ve3leg@hotmail.com> wrote in message news:<3EDD2CC1.9090204@hotmail.com>...
>
>>OK, let's see if someone can suggest a right track.
>>
>>The radio turns on, the squelch works, the speaker outputs static. That
>>much works.
>>
>>The LED display only turns on approx 30% of the time. When it does I can
>>change frequency with the up/down ocntrol on the mic. When I try to key
>>in a new frequency on the front panel about half the time the radio just
>>dies, the other half it changes freq. Problem is the 2,5,8,+,- keys
>>don't work either. When the radio turns on properly and the frequency
>>changes without the radio dying I can hear the outside world. I haven't
>>dared to try and transmit on it, who knows what might happen.

>>
>>If any of these symptoms sound familiar to anyone who has a Kenwood
>>TR-7800, please let me know.
>>
>>
>>Alex
>>VE3LEG
>>
>
>
> OK, its time for some systematic fault finding. Do you have a service
> manual for the thing - if not, get one, or at least a schematic. As
> mentioned before, the Vcc for the micro is probably OK - if you want
> to be fussy, stick your CRO on the line and see what the ripple/noise
> is (proably not much).
>
> The led turns on for 30% of the time and the radio works - when it
> doesnt turn on, try poking/tapping/stressing the baords to check for a
> loose connecton. Try heating and cooling - a domestic hairdryer for
> both functions works well.
>
> If this doesnt localise the fault, check the cpu xtal is oscillating.
> Check all pin voltages, you should be able to work out approx. from
> the schematic - in particualr, check data in/out lines ie as you
> toggle the up/down buttons.
>
> At the moment, this is all I can suggest - if you can hold it up in
> front of your monitor so I can see it I will try a bit harder hi hi...
>
> Good luck, its a great feeling when you crack a hard one - and BTW,
> micros very seldom fail....
>
> Regards,
> Andrew VK3BFA
>
> It sounds like the keypad is faulty as well - take it out of circuit
> to avoid compunding your problems, if the up/down buttons work then
> you dont need it at this stage and you can treat it as a separate
> fault later.
>
>>Roy Lewallen wrote:
>>
>>>Nearly all 5 volt ICs also have a 5% tolerance on the DC supply voltage.
>>>So 5.17 volts is normal and almost certainly well within specifications
>>>for the IC. I think it's very unlikely that the 5 volt supply is the
>>>problem -- you're on the wrong track.
>>>
>>>Roy Lewallen, W7EL
>>>
>>>Leon Heller wrote:

>>>
>>>
>>>>"Alex" <ve3leg@hotmail.com> wrote in message
>>>>news:3EDCCB0A.40205@hotmail.com...
>>>>
>>>>
>>>>>I'm trying to fix a Kenwood TR-7800 2 meter rig, and suspect that the
>>>>>CPU is the problem. Does anyone have a datasheet for a UPD650C-037 ?
>>>>>
>>>>>
>>>>>Someone sugested that the CPU supply voltage might be the problem, I
>>>>>measured it at 5.17 V DC. This seems odd, I've seen chips that run at 5V
>>>>>or 6V but not between. I need to know what the needed VCC for the chip
>>>>>is so I know if I have to replace a regulator somewhere or add a zener
>>>>>or if I'm on the wrong track.
>>>>
>>>>
>>>>
>>>>Regulators typically have a 5% or so tolerance on the output voltage,
>>>>so it
>>>>might be OK for a nominal 5V supply.
>>>>
>>>>73, Leon
>>>
>>>

4015. Help with Avantek and HP YIG oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 03:14:09 UTC
From: DJ Wang <djwang@redeye.mmrrcc.upenn.edu>
Message-ID: <slrnbeigag.5vh.djwang@redeye.mmrrcc.upenn.edu>
Source record: 34916

Can someone help me figuring out the pin outs of these two YIG oscillators?
HP 5086-7023 2.7-4.2GHz
Avantek S09-1358 4-8GHz
I found there are two coil windings on the HP that are roughly 12 ohm and
1.5 ohm and three on the Avantek one (1, 11 and 132 ohm). The HP YIG has
a straight connector with a total of 9 pins (only 7 are connected).
The Avantek YIG has 8 pin in a circular configuration surrounding the
SMA connector. Pin 1 and 2 have diodes connected to case (ground).
Any help would be appreciated. Thanks.

DJ
NM3R

4016. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 07:25:27 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <C66NOiAnxX6+EwCW@philstheboss.freeserve.co.uk>
Source record: 34917

Thanks Doc,

> It obviously did not occur to you to plug those numbers into
>Google.
>
> http://www.americanmicrosemi.com/products/specs/2N6166.phtml
>
> I didn't find anything on the 6166S. However, it has been my
>experience in the past that parts with letters after their numbers like
>that often indicate that the part is certified to be usable in specific
>(and sometimes critical) applications, such as biomedical or space.
I also found the 66 but not the 66S.

However thank you for your time and thoughts.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4017. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 07:28:44 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <BKINi6As0X6+Ewgf@philstheboss.freeserve.co.uk>
Source record: 34919

Hi L,

>"I" do have info on a 2N6166 but not the "S".
>
>It is a 100 watt RF Power Transistor rated at 150 MHz..
>NPN Silicon
>Designed for VHF Power amplifier applications in military and industrial
>equipment. Particularly suited for Class AB, B or C amplifier applications
>up to 200 MHz.
>
>Specified for 28 VDC, 150 MHz
>Output Power 100 Watts
>Min. Gain 6.0 dB
>Eff. 60%
>
>Specified for 13.5 VDC, 150 MHz
>Output Power 30 Watts
>Min. Gain 4.5 dB
>
>Parallel Impedance Characterization
>
>Max ratings:
>VCEO 35 VDC
>VCBO 65 VDC
>VEBO 4.0 VDC
>IC 9.0 ADC
>PD 117 WATTS - 0.667 W/DEGREES C.
>TSTG (storage temp) -65 TO +150 DEGREES C.

Thanks for that data.

I knew it would be in one of the data manuals.

However I stupidly disposed of my copies years ago in a house move.

Once again thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4018. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 07:31:01 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <UaeIGnB12X6+EwjB@philstheboss.freeserve.co.uk>
Source record: 34918

Hello Roy,

>Consequently, I think it would be safe to assume that the 2N6166S meets
>all the specs of a 2N6166. But there's probably no way to tell in what
>way it might be special, unless you have access to the internal
>specifications of the company that ordered it.
>
>Roy Lewallen, W7EL
Thanks for your input.

Regards
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4019. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 09:47:13 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <5FsGa.9354$Cm5.3777226@newsfep2-win.server.ntli.net>
Source record: 34941

> The insert only has two connections on the back, the same as the one
> that came out but it seems to be dropping the voltage by a
> considerable amount.
>
> I can only guess as to why this is as my knowledge of these
> microphones is very limited. I was wondering if someone may be able to
> shed some light on this?
==========
There are basically 2 types of electret mike capsules namely with 2 or 3 connections
Most of them have 2 connections ,with 1 connection often but not always bonded to the housing .
This is the negative supply connection with the other obviously the positive supply connection.
The positive supply connection is also the signal out connection.
Because the internal amplifier needs a low voltage power supply (typically 1.5 - 4.5 Volts , no more) a capcitor is required to separate that DC voltage from the amplifier input circuit) The capacitor is typically 1 - 3 microFarad (electrolytic) with its positive connection connected to the electret capsule.
Many radios have 8 - 9 v ,DC available at the microphone socket to cater for an amplified microphone,with or without DTMF encoder.
If you wish to use this supply for the electret mike you'll need to insert a voltage divider with say a 1KOhm and 680 Ohm resistor to reduce this voltage to no more than 4.5 V.
I you wish I can send you (as an e-mail attachment) the schematic diagramme of an amplified mike
circuit incorporating an electret capsule ,as published in QST -December 1991 , page 27.
There are also various schematics re FM Wireless Mikes using an electret capsule . A good site for that is Harry Lythall ,SM0VPO 's website (search for SM0VPO)
Hope this helps.

Frank GM0CSZ / KN6WH

4020. ** FLEA at MIT ** Sunday June 15th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 10:02:38 UTC
From: w1gsl@mit.edu
Message-ID: <3ee9a13e$0$3931$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 34921
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

+++ Now even more Buyers Parking !!!
Thanks to TKT we have use of their new parking lot
across Albany St from the SWAPFEST !!!

!! ** More Buyers PARKING is available ** for details see
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*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

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FLEA all SUMMER at MIT
Sunday June 15th 2003
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
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and sellers spaces are $20 for the first and
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The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
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*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
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Separate lines will form prior to gate opening
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well illuminated tailgate area is available for all
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Rates include one admission per space.

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$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

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Cambridge MA 02139
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****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

4021. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 12:43:24 UTC
From: troglodite@aol.com
Message-ID: <20030613084324.23689.00000561@mb-m27.aol.com>
Source record: 34922

>A bridge rectifier is a full wave rectifier ,hence its output is polarised.
>If a capacitor is required in an AC circuit a polarised capacitor in the
>polarised output of a bridge rectifier becomes a non-polarised capacitor for
>the AC circuit.
>However the electrolytic polarised capacitor is always is series with 2
>diodes ,resulting in a voltage drop of approx 1.4 V
>If that is acceptable ,the circuit should work.

Frank,

Actually, it seems like it should, but it doesn't. Consider this: Connect a non-polar capacitor from an AC source to a load resistor. With each half-cycle, current flows to the load depending on the capacitive reactance at that frequency. The current through the capacitor reverses at every zero crossing.

With the diode bridge, the voltage across the capacitor is unidirectional. The capacitor draws current briefly during the first few cycles, but there is no DISCHARGE PATH, hence the capacitor charges up to the peak voltage, and after that NO CURRENT FLOWS because the diodes are reverse biased. Try it.

Doug Moore KB9TMY (Formerly K6HWY)

4022. Simulating crystal filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 14:32:10 UTC
From: Petar Ristic <rileso@eunet.yu>
Message-ID: <bcclno$a6k$1@news.eunet.yu>
Source record: 34923

How to simulate crystal filters (10.7T9 and L10.7A), or anybody have characteristics (input and output impedance, bandwidth) for them.

4023. help with Avantek YIG osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 15:13:12 UTC
From: DJ Wang <djwang@redeye.mmrrcc.upenn.edu>
Message-ID: <slrnbejqel.9qc.djwang@redeye.mmrrcc.upenn.edu>
Source record: 34925

Hi,
I am looking for info on this Avantek YIG OSC. Its
Part number is S09-1358 and covers 4-8GHz.
It has three coil windings with roughly 1, 11 and
132 ohm. It seems that the one with 11 ohm reading is
the main tuning coil. There are 8 pins arranged in a
circular manner around the SMA connector. Any help
would be appreciated to figure out the pinouts,
voltage, and coil currents and polarities. Much
Thanks.

DJ / NM3R

4024. FA: Various transformers (audio, power, filament, etc)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 16:25:40 UTC
From: Ken <abcd@abcdcba2468.com>
Message-ID: <130620031225392784%abcd@abcdcba2468.com>
Source record: 34926
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3028978403

4025. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 17:42:19 UTC
From: Sparks <sparksw4eas@mindspring.com>
Message-ID: <3EEA0CFB.5DB3@mindspring.com>
Source record: 34924

Remember, The Cap is used to "Shift" the phase for a two winding motor
that is A/C operated :-) Regards Sparks W4EAS

4026. Re: HF multiband antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 18:36:06 UTC
From: George <George@hotmail.com>
Message-ID: <11f3a135a6accb95e2dce56b0c57f119@news.meganetnews.com>
Source record: 34928

> I'm looking for description (how to fo) of
> veritcal HF multiband antenna. How it's
> only possible many bands. Have You?
>

Simply filter long the meal with shaft, then
start sing a band of on (over below) the
double-ring. Scald to-wit sighs 'peace'
and craft the shaft a long.

You have.

4027. ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 18:52:25 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <da7kev8qmtkib1b6iu749lr3n68tot90h7@4ax.com>
Source record: 34929

Hi.

Has anyone got a copy of the windows ARRL Radio Designer program at all ?

It's no longer available and wouldn't mind a copy if at all possible.

Best regards

Clive

4028. Re: Simulating crystal filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 19:40:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <bcd9c4$65g$1@titan.btinternet.com>
Source record: 34930

Draw the complete circuit diagram. For each crystal insert values of L,Cs,Cp and R. Also values of L,C and R of any other associated components.

Insert everything, including frequencies, in your network analysis computer program, hit the start key and it's done.

The big question is how will you know whether you get the right answers ?

4029. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 20:39:59 UTC
From: Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbekdkv.ck5.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 34931

On Fri, 13 Jun 2003 10:42:19 -0700, Sparks <sparksw4eas@mindspring.com> wrote:
> Remember, The Cap is used to "Shift" the phase for a two winding motor
> that is A/C operated :-) Regards Sparks W4EAS

Exactly. And the way it shifts the phase is by current flowing
between the cap and the inductor, sometimes charging the cap and
sometimes discharging the cap. Discharging is not possible with a
diode bridge between the cap and the inductor.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4030. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 20:46:44 UTC
From: "J. Yazel" <jyazel@nls.net>
Message-ID: <8udkevk8orilcdbpt2kflm7i2r88bthlnu@4ax.com>
Source record: 34932

On Thu, 12 Jun 2003 13:16:58 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
>news:ved6leccbh8391@corp.supernews.com...
>> Some time ago I recall seeing an article using a polarized electrolyic
>> capacitor as a non-polarized by connecting it to a full wave bridge
>> rectifier. Anyone recall where I might have seen this and has anyone had
>> any success with this trick?
>> tnx
>> hank wd5jfr
>==========

How about using two identical caps end to end (one reversed)?

I haven't seen earlier message sin this thread so this may have
already been suggested.

Jack

4031. Re: Simulating crystal filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 21:19:54 UTC
From: Petar Ristic <rileso@eunet.yu>
Message-ID: <bcddid$j3h$1@news.eunet.yu>
Source record: 34933

My lapsus. Problem isn't in simulation, but in exact values and equivalent schematic for listed parts.

Thanks.

Reg Edwards <g4fgq.regp@btinternet.com> wrote in message news:bcd9c4$65g$1@titan.btinternet.com...
> Draw the complete circuit diagram. For each crystal insert values of L,Cs,Cp
> and R. Also values of L,C and R of any other associated components.
>
> Insert everything, including frequencies, in your network analysis computer
> program, hit the start key and it's done.
>
> The big question is how will you know whether you get the right answers ?
>
>

4032. Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 21:51:37 UTC
From: j999w@aol.com
Message-ID: <20030613175137.09979.00000496@mb-m26.aol.com>
Source record: 34934

Okay, this gets down to the nitty gritty of homebrew.

I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain window glass with a pair of tin snips ... if you do it under water. The editor noted: "Darned if it doesn't work!".

Does it ??

John Wilke
WB9UAI

4033. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:37:33 UTC
From: hexter@blazenet.net
Message-ID: <vekkhdjpe7339@corp.supernews.com>
Source record: 34935

In article <phgGa.7467$Cm5.3567356@newsfep2-win.server.ntli.net>,
gm0csz.kn6wh@ntlworld.com says...
>
>
>"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
>news:ved6leccbh8391@corp.supernews.com...
>> Some time ago I recall seeing an article using a polarized electrolyic
>> capacitor as a non-polarized by connecting it to a full wave bridge
>> rectifier. Anyone recall where I might have seen this and has anyone had
>> any success with this trick?
>> tnx
>> hank wd5jfr
>==========
>A bridge rectifier is a full wave rectifier ,hence its output is polarised.
>If a capacitor is required in an AC circuit a polarised capacitor in the
>polarised output of a bridge rectifier becomes a non-polarised capacitor for
>the AC circuit.
>However the electrolytic polarised capacitor is always is series with 2
>diodes ,resulting in a voltage drop of approx 1.4 V
>If that is acceptable ,the circuit should work.
>
>Frank GM0CSZ / KN6WH
>
The capacitor simply charges up through the bridge, and sits there, and holds
a charge, and does nothing useful! How do you extract energy back out of the
caps through diodes that are now reversed bias??? The circuit can't work,
and was probably one of the 'spoofs' in an April ham magazine, just to see
if anyone was paying attention.

I love it!!!!!

4034. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:42:51 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bcdk1basf0@208.206.142.105>
Source record: 34936

"J. Yazel" wrote:

> On Thu, 12 Jun 2003 13:16:58 +0100, "Frank Dinger"
> <gm0csz.kn6wh@ntlworld.com> wrote:
>
> >"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
> >news:ved6leccbh8391@corp.supernews.com...
> >> Some time ago I recall seeing an article using a polarized electrolyic
> >> capacitor as a non-polarized by connecting it to a full wave bridge
> >> rectifier. Anyone recall where I might have seen this and has anyone had
> >> any success with this trick?
> >> tnx
> >> hank wd5jfr
> >>==========
>
> How about using two identical caps end to end (one reversed)?
>
>

Isn't that what's inside a cap marked "non-polarized"? That's what I've read.

Dick

4035. frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:44:41 UTC
From: hexter@blazenet.net
Message-ID: <vekkupna833u51@corp.supernews.com>
Source record: 34937

If an LED is said to be operating at 540 angstroms, how many million mhz is that? If I shift the light output by 10 Ghz would I visibly see a differant color, or is the shift to small to be detected by the human eye.

Also, anyone know of a published specification for the sensitivity of the human eye in total darkness? I guess I would be looking for an answer in terms of fractions of a watt per square centimeter, or perhaps square inch.

Thank-you for any information you can provide.

4036. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:46:30 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bcdk86asf1@208.206.142.105>
Source record: 34938

J999w wrote:

> Okay, this gets down to the nitty gritty of homebrew.
>
> I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain
> window glass with a pair of tin snips ... if you do it under water. The editor
> noted: "Darned if it doesn't work!".
>
> Does it ??

You SURE that wasn't the April issue???

4037. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:51:24 UTC
From: hexter@blazenet.net
Message-ID: <veklbc1k2ogc6c@corp.supernews.com>
Source record: 34939

In article <20030613175137.09979.00000496@mb-m26.aol.com>, j999w@aol.comn says...
>
>Okay, this gets down to the nitty gritty of homebrew.
>
>I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain
>window glass with a pair of tin snips ... if you do it under water. The editor
>noted: "Darned if it doesn't work!".
>
>Does it ??
>
>John Wilke
>WB9UAI
I think he was a bit lucky in his endevours, however,

Most professional glass cutters will score glass with a cutter soaked in kerosene, and you can get away with some unusual things with glass while submerged. The 'snapping action' of the separation of glass into two separate pieces sends an ultrasonic shockwave across the plane of the glass, and this is what causes the 'shatter' to occur. When submerged, there is a far suppressed shockwave, and the glass just tends to let you 'nip' pieces out of it. I have drilled holes in glass with a normal drill bit while submerged in water.

4038. Re: help with Avantek YIG osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 22:55:44 UTC
From: hexter@blazenet.net
Message-ID: <vekljg8ttsn1ee@corp.supernews.com>
Source record: 34940

In article <slrnbejqel.9qc.djwang@redeye.mmrrcc.upenn.edu>,
djwang@redeye.mmrrcc.upenn.edu says...
>
>
>Hi,
>I am looking for info on this Avantek YIG OSC. Its
>Part number is S09-1358 and covers 4-8GHz.
>It has three coil windings with roughly 1, 11 and
>132 ohm. It seems that the one with 11 ohm reading is
>the main tuning coil. There are 8 pins arranged in a
>circular manner around the SMA connector. Any help
>would be appreciated to figure out the pinouts,
>voltage, and coil currents and polarities. Much
>Thanks.
>
>DJ / NM3R

All I remember is that they won't oscillate at all unless there is current
in one particular coil, but I forget which. You need the normal B+, and ground
for the electronics, and you need 'coil current' in one coil. 80 ma. seems
familiar to me, but check using Yahoo or google search, because it may only
be 8 ma. I don't want you to toast the thing.

4039. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 23:03:11 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <v32dneT1z_buxXejXTWcpA@ctc.net>
Source record: 34942

>
> Consequently, I think it would be safe to assume that the 2N6166S meets
> all the specs of a 2N6166. But there's probably no way to tell in what
> way it might be special, unless you have access to the internal
> specifications of the company that ordered it.
>
> Roy Lewallen, W7EL
>

Not only can the leter at the end be a selected component, it could mean the
type of package. I did not see the S version in my book. It could be a
Stud mount ?

4040. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 23:11:05 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <OZBGa.9651$Cm5.3876060@newsfep2-win.server.ntli.net>
Source record: 34853

> With the diode bridge, the voltage across the capacitor is unidirectional.
The
> capacitor draws current briefly during the first few cycles, but there is
no
> DISCHARGE PATH, hence the capacitor charges up to the peak voltage, and
after
> that NO CURRENT FLOWS because the diodes are reverse biased. Try it.
==========
Doug , Tnx for your response . You are right ,no current can flow in the
direction causing the capacitor to discharge (partly).
I have learnt again
Tnx
Frank GM0CSZ / KN6WH

4041. Re: PNP vs NPN Power Transistors & Reversing Battery Polarity

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-13 23:25:12 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EEA5D58.4020602@bellsouth.net>
Source record: 34943

Michael Black wrote:
> "Ralph Mowery" (rmowery@ctc.net) writes:
>
>>>>I would like to build a morse code oscillator circuit that utilizes an
>>>>MJ2955 (PNP) power transisitor. However, I don't have access to this
>>>>transistor, but do have access to its complimentary transistor, 2N3055
>>>>(NPN). Can I just reverse the polarity of the battery that powers the
>>>>circuit so that I can utilize the 2N3055 instead?
>>>
>>>That must be some morse code oscillator !
>>>
>>>Does it just not bother with RF and generated a loud enough tone that RF
>>
>>is not
>>
>>>required or something ?
>>>
>>>Those transistors are somewhat beefy for a ickle audio oscillator :)
>>>
>>
>>About 30 years ago for a dollar or two there were some circuit board CPOs
>>that used a to-3 power transistor with no heatsink and another small one.
>>Think they ran off either one or two batteries. You hooked the batteries ,
>>key, and speaker to it. Don't remember a volume control. They were not all
>>that loud.
>>
>>
>
> For that matter, the first ARRL Handbook I ever got, the 1971 edition,
> has a similar circuit.
>
> |-------.01uF---------|-----------
> | Q2 C |
> | Q1 C----------B 8ohm speaker
> |----B E-| |
> | E---------------|---------|
> 1 | _|_
> 0 | _____ 1.5V
> 0 | |+
> K | Key
> |_____________________|_________|
>
> I hope that's clear.
>

> Q1 is a small signal NPN, and Q2 is a TO-3 PNP. I'm too lazy to
> look up whether they were germanium or silicon, but a possible transistor
> for Q1 is a 2N2102 and Q2 is a 2N2869
>
> The emitter of Q2 does not connect to the emitter of Q1, in case
> my drawing is not clear.
>
> This sort of circuit showed up in quite a few places.
>
> Michael VE2BVW
>

The original circuit used germanium transistors. I think they formed a sort of relaxation oscillator, the output was an asymetrical square wave as I recall.

4042. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 02:19:01 UTC
From: Cliff Curry <cliffcurry323@attbi.com>
Message-ID: <pCvGa.184253$M01.84594@sccrnsc02>
Source record: 34944

"gudmundur" <hexter@blazenet.net> wrote in message
news:vekkupna833u51@corp.supernews.com...
> If an LED is said to be operating at 540 angstroms, how many million mhz
> is that? If I shift the light output by 10 Ghz would I visibly see a
differant
> color, or is the shift to small to be detected by the human eye.
>
> Also, anyone know of a published specification for the sensitivity of the
> human eye in total darkness? I guess I would be looking for an answer in
> terms of fractions of a watt per square centimeter, or perhaps square
inch.
>
> Thank-you for any information you can provide.
>

From http://www.electro-optical.com/whitepapers/candela.htm

Typical levels of Luminance and Illuminance

(For a luminance factor of 20%, average reflectance of a typical scene)

Outdoor Illuminance (lux) Luminance (cd m-2)
Bright sun 50K - 100K 3K - 6K
Hazy day 25K - 50K 1.5K - 3K
Cloudy bright 10K - 25K 600 - 1.5K
Cloudy dull 2K - 10K 120 - 600
Very dull 100 - 2K 6 - 120
Sunset 1 - 100 0.06 - 6
Full moon 0.01 - 0.1 0.0006 - 0.006
Starlight 0.001 - 0.001 0.000006 - 0.00006
Indoor Illuminance (lux) Luminance (cd m-2)
Operating theatre 5K - 10K 300 - 600
Shop windows 1K - 5K 60 - 300
Drawing office 300 - 500 18 - 30
Office 200 - 300 12 - 18
Living rooms 50 - 200 3 - 12
Corridors 50 - 100 3 - 6
Good street light 20 1.2
Poor street lighting 0.1 .006

At the threshold of vision the dark adapted observer can see a flash if it
contains on average 90
photons at the cornea or 9 at the retina. This is equivalent to a candle at
30 miles on a clear night.

4043. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 03:12:24 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3eea9192$0$188@news.impulse.net>
Source record: 34945

"gudmundur" <hexter@blazenet.net> wrote in message
news:vekkupna833u51@corp.supernews.com...
> If an LED is said to be operating at 540 angstroms, how many million mhz
> is that? If I shift the light output by 10 Ghz would I visibly see a
differant
> color, or is the shift to small to be detected by the human eye.
>
> Also, anyone know of a published specification for the sensitivity of the
> human eye in total darkness? I guess I would be looking for an answer in
> terms of fractions of a watt per square centimeter, or perhaps square
inch.
>
> Thank-you for any information you can provide.
>

Frequency = speed of light / wavelength

angstrom = 10 to the minus 10 meters (10^-10)

Do the math.

BTW, the visible range is roughly 7000 to 4000 angstroms. Your LED at 540
angstroms would not be seen by human eyes. Perhaps you meant 540 nanometers
(5400 angstroms)?

-CB

4044. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 03:36:51 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <c95lev4dm873s69ptf57pgsq1dg8qkvo5u@4ax.com>
Source record: 34946

On Sat, 14 Jun 2003 02:19:01 GMT, "Cliff Curry"
<cliffcurry323@attbi.com> wrote:

>"gudmundur" <hexter@blazenet.net> wrote in message
>news:vekkupna833u51@corp.supernews.com...
>> If an LED is said to be operating at 540 angstroms, how many million mhz
>> is that? If I shift the light output by 10 Ghz would I visibly see a
>differant
>> color, or is the shift to small to be detected by the human eye.
>>
First of all, the visible spectrum ranges from 400 nanometers (violet)
to 700 nanometers (red). 1 nanometer is the same as 10 Angstroms.

The wavelength equals the speed of light divided by the frequency
or: lambda = c / nu although you need to watch your units carefully.

This corresponds to 7.5 x 10^14 (violet) to 4 x 10^14 (red) Hz. In
this range, wavelength is used far more often than frequency, which
would be in hundreds of TeraHertz.

10 GigaHertz would be trivial.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4045. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 03:39:32 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <bce5dodla1@slb2.atl.mindspring.net>
Source record: 34847

I would recommend searching for a program called RFSIM99 which is a free windows 'S' parameter simulator program that I find very useful.

It can also do Monte Carlo tolerance analysis which helps to see if any parts are critically sensitive. This is a great way to see if a circuit will be easy to get running or a finicky critter.

==========

There is another program that is often suggested as a replacement for the ARRL Radio Designer program. Unfortunately I can't remember which one it is, but I understand that it is better and easier to use than the ARRL Designer which is part of why they no longer sell the ARRL Designer.

Perhaps somebody online can tell us which program it is. I think there is a free version for home use....

Jim Pennell
N6BIU

4046. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 04:23:49 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <0n8levgq50pjfdu99eek1janutu5bvb3uc@4ax.com>
Source record: 34848

On Fri, 13 Jun 2003 20:39:32 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

| I would recommend searching for a program called RFSIM99 which is a free
|windows 'S' parameter simulator program that I find very useful.
|
| It can also do Monte Carlo tolerance analysis which helps to see if any
|parts are critically sensitive. This is a great way to see if a circuit
|will be easy to get running or a finicky critter.
|
|=====================
|
| There is another program that is often suggested as a replacement for the
|ARRL Radio Designer program. Unfortunately I can't remember which one it
|is, but I understand that it is better and easier to use than the ARRL
|Designer which is part of why they no longer sell the ARRL Designer.
|
| Perhaps somebody online can tell us which program it is. I think there
|is a free version for home use....

Ansoft's Serenade SV. I wouldn't call it easier to use than ARD, but
more powerful. It will read ARD files however, since both programs
are originally by Compact software.

4047. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 04:26:31 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <0s8levoj5avstoc31u241lbbcp9r4rp4va@4ax.com>
Source record: 34849

On Fri, 13 Jun 2003 19:52:25 +0100, c.a.m@antijunk3.blueyonder.co.uk
wrote:

|
|Hi.
|
|Has anyone got a copy of the windows ARRL Radio Designer program at all ?
|
|It's no longer available and wouldn't mind a copy if at all possible.
|
|Best regards

I have a legal copy w/manual that I will part with for a reasonable
amount.

email me at mycall@arrl.org, where mycall is n7ws.

4048. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 06:18:21 UTC
From: no-span-pse@pse.com
Message-ID: <3eeabdc3.936288@news.free.fr>
Source record: 34850

Hello,

On Fri, 13 Jun 2003 20:39:32 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

>: There is another program that is often suggested as a replacement for the
>:ARRL Radio Designer program. Unfortunately I can't remember which one it
>:is, but I understand that it is better and easier to use than the ARRL
>:Designer which is part of why they no longer sell the ARRL Designer.
>:
>: Perhaps somebody online can tell us which program it is. I think there
>:is a free version for home use....

>: Jim Pennell
>: N6BIU

I think it's : SERENADE SV.
you can see :
<http://www.ansoft.com/about/academics/sersv/index.cfm>

Regards,
Francis
F6AWN

4049. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 07:26:31 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <8djlev8cdtpf4r7pn18s6at7rvofmtrf9d@4ax.com>
Source record: 34851

> There is another program that is often suggested as a replacement for the
>ARRL Radio Designer program. Unfortunately I can't remember which one it
>is, but I understand that it is better and easier to use than the ARRL
>Designer which is part of why they no longer sell the ARRL Designer.
>
> Perhaps somebody online can tell us which program it is. I think there
>is a free version for home use....

Yes, it's Serenade SV, which I have.

I was just interested in trying out the ARRL Radio Designer as well, to see how well I got on with it.

Clive.

4050. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 07:35:50 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <40klevkihv6n7ouoeiq3ep6kgcb4m06onv@4ax.com>
Source record: 34852

Hi Wes.

>I have a legal copy w/manual that I will part with for a reasonable
>amount.
>
>email me at mycall@arrl.org, where mycall is n7ws.

Just tried to email you, it got bounced back within 2 mins :(

Says the email addy does not exist ?

Clive

4051. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 09:33:25 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <QZBGa.9652$Cm5.3876060@newsfep2-win.server.ntli.net>
Source record: 34854

> Most professional glass cutters will score glass with a cutter soaked
> in kerosene, and you can get away with some unusual things with glass
> while submerged. The 'snapping action' of the separation of glass into
> two separate pieces sends an ultrasonic shockwave across the plane of
> the glass, and this is what causes the 'shatter' to occur. When submerged,
> there is a far suppressed shockwave, and the glass just tends to let you
> 'nip' pieces out of it. I have drilled holes in glass with a normal drill
> bit while submerged in water.
=======
On this topic , I would like to use part of a glass bottle or jar as a
'chimney ' for a RF Power Valve (tube).
This requires the bottle or jar to be cut removing its bottom and neck.
Has anybody on this NG done this (probably for a different reason) and how.
Note : I have heard that 'official chimneys' are made of pyrex glass, best
suitable for high temperatures .
As an alternative I could try making a chimney from teflon sheet as used in
the kitchen for frying food without a fatty substance , however that type
of teflon sheet is rather thin (only 0.15 millimetres = 0.006 inch) to make
a sturdy cylinder serving as a chimney.
Any advice will be much appreciated.

Frank GM0CSZ / KN6WH

4052. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 10:06:39 UTC
From: "David J. Windisch" <davidw@copper.net>
Message-ID: <3eeaf204_2@newsfeed>
Source record: 34855

Get a suitably-sized Coleman camping lantern glass globe from a
camping-supply store. 73, Dave, N3HE

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:QZBGa.9652$Cm5.3876060@newsfep2-win.server.ntli.net...
an alternative I could try making a chimney from teflon sheet as used in
> the kitchen for frying food without a fatty substance , however that
type
> of teflon sheet is rather thin (only 0.15 millimetres = 0.006 inch) to
make
> a sturdy cylinder serving as a chimney.
> Any advice will be much appreciated.
>
> Frank GM0CSZ / KN6WH
>
>
>
>

4053. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 11:09:04 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3eeb023d$0$48915$edfadb0f@dtext02.news.tele.dk>
Source record: 34856

Hello Frank

> This requires the bottle or jar to be cut removing its bottom and neck.
> Has anybody on this NG done this (probably for a different reason) and
how.

It is no problem to remove the bottom and the neck of a bottle.

Take a piece of wooden thread, wrap it around the bottle where you want
to make the cut, then soake it with methylan (alcohol) and set it on fire,
at the time when the fire stops then put the bottle under cold water and
it will snap where the the thread is.

Regards max

4054. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 11:36:24 UTC
From: Bob P <kb8tlHATESSPAM@yahoo.COM>
Message-ID: <YMDGa.3693$a7.1288174@newssvr28.news.prodigy.com>
Source record: 34857

Or wrap with nichrome wire and connect to appropriate low voltage, high
current power source...
Bob

kb8tl at yahoo dot com

"Max" <Max_Jens@post9.tele.dk.invalid> wrote in message
news:3eeb023d$0$48915$edfadb0f@dtext02.news.tele.dk...
> Hello Frank
>
> > This requires the bottle or jar to be cut removing its bottom and neck.
> > Has anybody on this NG done this (probably for a different reason) and
> how.
>
> It is no problem to remove the bottom and the neck of a bottle.
>
> Take a piece of wooden thread, wrap it around the bottle where you want
> to make the cut, then soake it with methylan (alcohol) and set it on fire,
> at the time when the fire stops then put the bottle under cold water and
> it will snap where the the thread is.
>
> Regards max
>
>

4055. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 13:18:49 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bcf7bpbgt1@titan.btinternet.com>
Source record: 34858

"Dick Carroll;" <dixie@townsqr.com> wrote in message
news:bcdk86asf1@208.206.142.105...
>
>
> J999w wrote:
>
> > Okay, this gets down to the nitty gritty of homebrew.
> >
> > I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut
plain
> > window glass with a pair of tin snips ... if you do it under water. The
editor
> > noted: "Darned if it doesn't work!".
> >
> > Does it ??
>
> You SURE that wasn't the April issue???

This technique has been well-known for at least 40 years. At any rate, that
is about how long I've known of it.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4056. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 15:18:10 UTC
From: Iain Kelly <no.spam@m0pcb.co.uk>
Message-ID: <dpemev8dngd7jdq4m9cl3f1nk0kiamdn9b@4ax.com>
Source record: 34859

On Fri, 13 Jun 2003 10:47:13 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

Hi Frank,
Thanks for the reply...

>There are basically 2 types of electret mike capsules namely with 2 or 3
>connections
>Most of them have 2 connections ,with 1 connection often but not always
>bonded to the housing .
>This is the negative supply connection with the other obviously the positive
>supply connection.
>The positive supply connection is also the signal out connection.
>Because the internal amplifier needs a low voltage power supply (typically
>1.5 - 4.5 Volts , no more) a capcitor is required to separate that DC
>voltage from the amplifier input circuit) The capacitor is typically 1 - 3
>microFarad (electrolytic) with its positive connection connected to the
>electret capsule.

I am not sure if you are familiar with the heatherlite/mobilite hands
free mic. assemblies, but that's what it is. The voltage out of the
box to the mic insert is about 4.4V+/- with no insert connected. When
I connect the insert the voltage drops way down. I am not sure why
this is.

>Many radios have 8 - 9 v ,DC available at the microphone socket to cater for
>an amplified microphone,with or without DTMF encoder.
>If you wish to use this supply for the electret mike you'll need to insert a
>voltage divider with say a 1KOhm and 680 Ohm resistor to reduce this voltage
>to no more than 4.5 V.

As I say, there appears to be a voltage divider circuit built into the
heatherlite mic. box, as the voltage out to the insert reads about
4.5V ish... I'll go back to t and do some more "poking" around!! :-)

>I you wish I can send you (as an e-mail attachment) the schematic diagramme
>of an amplified mike
>circuit incorporating an electret capsule ,as published in QST -December
>1991 , page 27.

If it isn't a bother I'd appreciate a look at the schematic. My email
address is iain <at> m0pcb <dot> co <dot> uk. As you may have guessed
I don't like spam email so I tend to avoid giving my address out too
much!!

>There are also various schematics re FM Wireless Mikes using an electret
>capsule . A good site for that is Harry Lythall ,SM0VPO 's website (search

>for SM0VPO)
>Hope this helps.

I shall have a rake around on the net and see what I can find. And yes
it has helped!! :-)

Cheers,

Iain M0PCB

4057. Re: electret microphones...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 16:18:59 UTC
From: fmmck@aol.com
Message-ID: <20030614121859.00319.00000578@mb-m12.aol.com>
Source record: 34860

<< I am not sure if you are familiar with the heatherlite/mobilite hands
free mic. assemblies, but that's what it is. The voltage out of the
box to the mic insert is about 4.4V+/- with no insert connected. When
I connect the insert the voltage drops way down. I am not sure why
this is. >>

Iain-

What is "way down"? I would expect this circuit might drop to around 1.0 to
2.5 volts DC. The AC voltage output might be millivolts, so the DC voltage
could be relatively low.

Not to be insulting, but is it possible you connected the mic insert backwards?
I understand some have the minus lead connected to the metal case, but some
have the positive lead connected to the case. I would suspect this if there
was absolutely no output from the microphone.

Getting back to your original question, you certainly can have two microphones,
although a buffer amplifier or isolation resistor from each may be required.
However, you have to get one working first!

73, Fred, K4DII

4058. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 16:38:38 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vemjsh5f3d7v72@corp.supernews.com>
Source record: 34861

What are the minimum number of photons that today's technology can detect...
What detectors are availble at a reasonable price for home experiments?
tnx
hank wd5jfr
"Cliff Curry" <cliffcurry323@attbi.com> wrote in message
news:pCvGa.184253$M01.84594@sccrnsc02...
> "gudmundur" <hexter@blazenet.net> wrote in message
> news:vekkupna833u51@corp.supernews.com...
> > If an LED is said to be operating at 540 angstroms, how many million mhz
> > is that? If I shift the light output by 10 Ghz would I visibly see a
> differant
> > color, or is the shift to small to be detected by the human eye.
> >
> > Also, anyone know of a published specification for the sensitivity of
the
> > human eye in total darkness? I guess I would be looking for an answer in
> > terms of fractions of a watt per square centimeter, or perhaps square
> inch.
> >
> > Thank-you for any information you can provide.
> >
>
>
>
> From http://www.electro-optical.com/whitepapers/candela.htm
>
>
>
> Typical levels of Luminance and Illuminance
>
> (For a luminance factor of 20%, average reflectance of a typical scene)
>
> Outdoor Illuminance (lux) Luminance (cd m-2)
> Bright sun 50K - 100K 3K - 6K
> Hazy day 25K - 50K 1.5K - 3K
> Cloudy bright 10K - 25K 600 - 1.5K
> Cloudy dull 2K - 10K 120 - 600
> Very dull 100 - 2K 6 - 120
> Sunset 1 - 100 0.06 - 6
> Full moon 0.01 - 0.1 0.0006 - 0.006
> Starlight 0.001 - 0.001 0.000006 - 0.00006
> Indoor Illuminance (lux) Luminance (cd m-2)
> Operating theatre 5K - 10K 300 - 600
> Shop windows 1K - 5K 60 - 300

> Drawing office 300 - 500 18 - 30
> Office 200 - 300 12 - 18
> Living rooms 50 - 200 3 - 12
> Corridors 50 - 100 3 - 6
> Good street light 20 1.2
> Poor street lighting 0.1 .006
>
> At the threshold of vision the dark adapted observer can see a flash if it
> contains on average 90
> photons at the cornea or 9 at the retina. This is equivalent to a candle
at
> 30 miles on a clear night.
>
>

4059. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 16:47:38 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3EEB51AA.7050700@PAMyahoo.ca>
Source record: 34862

Try arrl.net
73 Eskay

c.a.m@antijunk3.blueyonder.co.uk wrote:
> Hi Wes.
>
>
>>I have a legal copy w/manual that I will part with for a reasonable
>>amount.
>>
>>email me at mycall@arrl.org, where mycall is n7ws.
>
>
> Just tried to email you, it got bounced back within 2 mins :(
>
> Says the email addy does not exist ?
>
> Clive
>

4060. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 16:48:39 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3EEB51E7.2040503@PAMyahoo.ca>
Source record: 34863

Try arrl.net
73 Eskay

c.a.m@antijunk3.blueyonder.co.uk wrote:
> Hi Wes.
>
>
>>I have a legal copy w/manual that I will part with for a reasonable
>>amount.
>>
>>email me at mycall@arrl.org, where mycall is n7ws.
>
>
> Just tried to email you, it got bounced back within 2 mins :(
>
> Says the email addy does not exist ?
>
> Clive
>

4061. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 16:53:13 UTC
From: Eskay <sieb_k@spamyahoo.ca>
Message-ID: <3EEB52F9.7010800@spamyahoo.ca>
Source record: 34864

```
try: arrl.net
73 Eskay
c.a.m@antijunk3.blueyonder.co.uk wrote:
> Hi Wes.
>
>
>>I have a legal copy w/manual that I will part with for a reasonable
>>amount.
>>
>>email me at mycall@arrl.org, where mycall is n7ws.
>
>
> Just tried to email you, it got bounced back within 2 mins :(
>
> Says the email addy does not exist ?
>
> Clive
>
```

4062. Re: ARRL Radio Designer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 17:20:34 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <u9mmevgnkvjtgcarq9tdlh6f831fo8gecs@4ax.com>
Source record: 34865

On Sat, 14 Jun 2003 12:47:38 -0400, Eskay <sieb_kNOS@PAMyahoo.ca>
wrote:

|Try arrl.net

okay okay, I emailed him privately and fixed it.

| 73 Eskay
|
|c.a.m@antijunk3.blueyonder.co.uk wrote:
|> Hi Wes.
|>
|>
|>>I have a legal copy w/manual that I will part with for a reasonable
|>>amount.
|>>
|>>email me at mycall@arrl.org, where mycall is n7ws.
|>
|>
|> Just tried to email you, it got bounced back within 2 mins :(
|>
|> Says the email addy does not exist ?
|>
|> Clive
|>

4063. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 17:39:35 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <47nmevg34hpnqf0g0t5nf3oigcbh3gcjrc@4ax.com>
Source record: 34866

>What are the minimum number of photons that today's technology can detect...

One photon.

>What detectors are availble at a reasonable price for home experiments?

Not sure, I can across a web site earlier this week that had detectors that can detect just one photon, or at least that's what it said, god knows where it was though, I've since cleared out my cache :(

I find it weird though, at what frequency do radio waves become photons ? ... assuming the scientists have figured things out ok, though some say light ways are not photons and are still waves, guess the debates still out.

Anyway.

Clive

4064. Re: Looking for HF sythesiser schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 19:22:43 UTC
From: Marcus Sleightholm <marcus.sleightholm@btinternet.com>
Message-ID: <bcfsm3cnh1@hercules.btinternet.com>
Source record: 34867

Have you tried Hands DDS3 synth kit - it works very well and is based on a 9852 chip. I've made 2 and they work, very neat way of implementing a signal generator.

73 Marcus M3ChB

"Duncan Walters" <pentode@ntlworld.com> wrote in message news:JYtDa.3584$tV.2582@newsfep1-gui.server.ntli.net...
> Hi guys,
> Does anyone know where on the web I can find
> a minimal component schematic to build a PLL
> or DDS synthesiser which will give me a clean 1 to 30MHz signal?
> Any assistance will be greatly appreciated.
>
> Duncan G4DFV
>
>

4065. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 19:41:24 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vemuj6kvhfl594@corp.supernews.com>
Source record: 34868

How can the detector tell if it's only one photon or more. Does theory
provide for fractional photons?
tnx
hank wd5jfr
<c.a.m@antijunk3.blueyonder.co.uk> wrote in message
news:47nmevg34hpnqf0g0t5nf3oigcbh3gcjrc@4ax.com...
>
> >What are the minimum number of photons that today's technology can
detect...
>
> One photon.
>
>
> >What detectors are availble at a reasonable price for home experiments?
>
> Not sure, I can across a web site earlier this week that had detectors
that can
> detect just one photon, or at least that's what it said, god knows where
it was
> though, I've since cleared out my cache :(
>
>
> I find it weird though, at what frequency do radio waves become photons ?
...
> assuming the scientists have figured things out ok, though some say light
ways
> are not photons and are still waves, guess the debates still out.
>
> Anyway.
>
> Clive
>

4066. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 20:24:27 UTC
From: mcalhoun@ksu.edu
Message-ID: <bcg09r$82v@unix2.cc.ksu.edu>
Source record: 34869

>I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain
>window glass with a pair of tin snips ... if you do it under water. The editor
>noted: "Darned if it doesn't work!".
>Does it ??

It's not so much "cutting" as "chipping"; basically, the water keeps the
little chips from flying off into the environment (and your eyes).

Immediately after I read that article, I used the technique to "cut" a
circle (probably started with a hexagon or octogon) for a flashlight
whose protective glass had been broken. It worked, and I used that
flashlight for a number of years thereafter.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4067. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 20:40:50 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3eeb8852$0$48915$edfadb0f@dtext02.news.tele.dk>
Source record: 34870

Hello Myron

> >I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut
plain
> >window glass with a pair of tin snips ... if you do it under water. The
editor
> >noted: "Darned if it doesn't work!".
> >Does it ??
>
> It's not so much "cutting" as "chipping"; basically, the water keeps the
> little chips from flying off into the environment (and your eyes).

Can you please explaint to a me what kind of tool a "pair of tin snips" is,
I am from a part of the world where we do not have something by that name.

Regards Max

4068. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 21:05:20 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <Y6MGa.3600$LP.2339@newsfep4-winn.server.ntli.net>
Source record: 34871

They're basically a pair of scissors for cutting sheet metal, long handles (15") and short (3") sturdy blades. One type is known as "Aviation snips" in some parts.

Look here at a picture
http://www.rapidelectronics.co.uk/toolsmech_86-2140.htm

--
Alec Wood M1BNK
Teesside UK

Interested in Ham Radio....have a look at www.ukradioamateur.org

"Max" <Max_Jens@post9.tele.dk.invalid> wrote in message
news:3eeb8852$0$48915$edfadb0f@dtext02.news.tele.dk...
> Hello Myron
>
> > >I noted in the July, 1961 QST, page 76, Hints and Kinks that you can
cut
> plain
> > >window glass with a pair of tin snips ... if you do it under water. The
> editor
> > >noted: "Darned if it doesn't work!".
> > >Does it ??
> >
> > It's not so much "cutting" as "chipping"; basically, the water keeps the
> > little chips from flying off into the environment (and your eyes).
>
> Can you please explaint to a me what kind of tool a "pair of tin snips"
is,
> I am from a part of the world where we do not have something by that name.
>
> Regards Max
>
>

4069. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 21:17:25 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <j63nevojgak07tg2ignpu4nnidfgnkov08@4ax.com>
Source record: 34872

>How can the detector tell if it's only one photon or more. Does theory
>provide for fractional photons?

That I can't say, I'm not up on the theories tbh.

I guess it could be just an image intensifier at a guess ... an incoming photon hits a charged barrier made from various chemicals, this barrier then emits a burst of photons onto the next layer - triggered by the incoming photon.

The number of photons emitted by the charged barrier is I guess consistent with the number of incoming photons (1 in, 100 out as a pure example), in so doing makes it easier to work out how many incoming photons you have - no need for a super duper one photon detector.

That's my guess anyway.

Probably completely wrong though lol.

But that's how image intensifiers work anyhow.

As for fractional photons, I don't think their theories allow for such things.

Clive

4070. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 22:04:12 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3eeb9bdc$0$48893$edfadb0f@dtext02.news.tele.dk>
Source record: 34873

Hello Alexander

> They're basically a pair of scissors for cutting sheet metal, long handles
> (15") and short (3") sturdy blades. One type is known as "Aviation snips"
in
> some parts.

Thank's for info, I know exactly what kind of tool it is, I am a educated as
a smith,
and that kind of cutters is well known here where I live. The problem is
that
sometime it is difficult to translate things like that to a non english
language.

Regards Max

4071. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 23:42:30 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <vicnevcav0deqbglq3m7m90530fi0jc5n6@4ax.com>
Source record: 34874

On Sun, 15 Jun 2003 00:04:12 +0200, "Max"
<Max_Jens@post9.tele.dk.invalid> wrote:

>Hello Alexander
>
>> They're basically a pair of scissors for cutting sheet metal, long handles
>> (15") and short (3") sturdy blades. One type is known as "Aviation snips"
>in
>> some parts.
>
>Thank's for info, I know exactly what kind of tool it is, I am a educated as
>a smith,
>and that kind of cutters is well known here where I live. The problem is
>that
>sometime it is difficult to translate things like that to a non english
>language.
>
It isn't always easy between English and English. ;-)

Between English speaking countries there are some significant
differences in wording, spelling, and pronounciation.

In the US, some differences between regions and subcultures.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4072. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-14 23:43:57 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <8ncnev8lqikstaqk4bu52g39iihrv2k3ho@4ax.com>
Source record: 34875

On Sat, 14 Jun 2003 22:17:25 +0100, c.a.m@antijunk3.blueyonder.co.uk
wrote:

>>How can the detector tell if it's only one photon or more. Does theory
>>provide for fractional photons?
>
>As for fractional photons, I don't think their theories allow for such things.
>
As far as I understand, a photon is an indivisible unit. Of course,
they said that about atoms at one point.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4073. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 01:05:33 UTC
From: novatech@eskimo.com
Message-ID: <bcggot$bf0$1@eskinews.eskimo.com>
Source record: 34876

c.a.m@antijunk3.blueyonder.co.uk writes:

>I find it weird though, at what frequency do radio waves become photons ? ...
>assuming the scientists have figured things out ok, though some say light ways
>are not photons and are still waves, guess the debates still out.

If you use quantum mechanics, photons and waves are "duals" of each other and can be used interchangeably as necessary. It is more convenient to do the math for photons for photodetectors, but you could write the wave equations if you wanted. There is no exact point in frequency that you need to go from waves to photons to get the right answers.

A classic homework problem in 1st year quantum physics is to write the wave equation for a car.

>Anyway.

>Clive

Have fun with it.

Steve.

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

4074. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 02:01:52 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bcgk2g$ho4$0@208.206.142.89>
Source record: 34877

Frank Dinger wrote:

> I would like to use part of a glass bottle or jar as a
> 'chimney ' for a RF Power Valve (tube).
> This requires the bottle or jar to be cut removing its bottom and neck.
> Has anybody on this NG done this (probably for a different reason) and how.
> Note : I have heard that 'official chimneys' are made of pyrex glass, best
> suitable for high temperatures .
> As an alternative I could try making a chimney from teflon sheet as used in
> the kitchen for frying food without a fatty substance , however that type
> of teflon sheet is rather thin (only 0.15 millimetres = 0.006 inch) to make
> a sturdy cylinder serving as a chimney.
> Any advice will be much appreciated.

Some hams over here use Pyrex glass chimneys for Coleman gas camping lanterns
for tube chimneys. I don't know if you have them available there.
They come in a couple sizes, one works well for a 3-500Z.

Dick

4075. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 03:05:11 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <tgonevkv6r5ktb428kplu1u3r8or20l923@4ax.com>
Source record: 34878

On 15 Jun 2003 02:01:52 GMT, "Dick Carroll;" <dixie@townsqr.com>
wrote:

> Some hams over here use Pyrex glass chimneys for Coleman gas camping lanterns
>for tube chimneys. I don't know if you have them available there.
>They come in a couple sizes, one works well for a 3-500Z.
>
Always easier to work with off-the-shelf components.

The lantern parts are fine with heat as well.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4076. WTB: Manual for the Heathkit HW 16 CW Transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 03:15:43 UTC
From: Redbone <redbone1@swbell.net>
Message-ID: <zxRGa.2479$tz4.2387@newssvr32.news.prodigy.com>
Source record: 34879

I would like to buy an assembly manual for the Heath Kit HW 16 Novice CW Transciever. I would be willing to settle for a Xerox or photocopy as long as it clear and readable. Please include shipping to zip code 77701 with your asking price.

Thanks.....Pat Green.... KC5WCC

4077. Re: WTB: Manual for the Heathkit HW 16 CW Transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 03:59:52 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EEBEF53.1F162E89@bellatlantic.net>
Source record: 34880

Redbone wrote:
>
> I would like to buy an assembly manual for the Heath Kit HW 16 Novice CW
> Transciever. I would be willing to settle for a Xerox or photocopy as long
> as it clear and readable. Please include shipping to zip code 77701 with
> your asking price.
>
> Thanks.....Pat Green.... KC5WCC

Sarrio sells manuals - check out the following url:
http://www.sarrio.com/sarrio/rsman2.html

Also you can download a partial manual from BAMA for free:
http://bama.sbc.edu/

4078. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 04:40:58 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EEBF8DA.1040805@bellsouth.net>
Source record: 34881

> I find it weird though, at what frequency do radio waves become photons ? ...
> assuming the scientists have figured things out ok, though some say light ways
> are not photons and are still waves, guess the debates still out.
>
> Anyway.
>
> Clive
>

Actually you could represent radio waves as photons, even at VLF! The dual nature of light as photons and waves applies to ALL electromagnetic radiation, which is what light IS!

Now if waves are photons and photons are waves and photons are particles this leads to some interresting stuff. First it seems that photons DO have some mass, or at least a mass equalivant. Does this means that when you walk through a door you emerge on the other side as a difraction pattern? Maybe!

4079. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 04:51:15 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EEBFB43.7030702@bellsouth.net>
Source record: 34882

J999w wrote:
> Okay, this gets down to the nitty gritty of homebrew.
>
> I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain
> window glass with a pair of tin snips ... if you do it under water. The editor
> noted: "Darned if it doesn't work!".
>
> Does it ??
>
> John Wilke
> WB9UAI

There are several ways to deal with glass. You can cut sheet glass
with a wet saw tile cutter, just go slow. I needed to cut a circle out of
thick glass (3/4" thick plate) to make a blank for a telescope mirror.
I made my own circle cutter out of a wooden disk (cut out of particle
board with a router) to which I put a 1/2" carrage bolt in the middle to
chuck it in a drill press. I wrapped a piece of 3" wide thin steel around
this disk and cut 4 triangle 'gaps' in the metal. It is held to the
disk with screws. The glass is put on the drill press table with a piece
of homasote fiber board between it and the table. The cutter
is run at the lowest possible rpm (190rpm on my drill press). Water and
number 80 carbo does the cutting, a dam of plumbers putty or play dough
on the glass keeps the slurry on the work.

Took about a half hour to cut through the 3/4 plate.
I made two 7" dia glass disks this way.

4080. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 04:54:40 UTC
From: averyfineman@aol.com
Message-ID: <20030615005440.18497.00000723@mb-m05.aol.com>
Source record: 34883

In article <bcdk86asf1@208.206.142.105>, "Dick Carroll;" <dixie@townsqr.com>
writes:

>J999w wrote:
>
>> Okay, this gets down to the nitty gritty of homebrew.
>>
>> I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut
plain
>> window glass with a pair of tin snips ... if you do it under water. The
editor
>> noted: "Darned if it doesn't work!".
>>
>> Does it ??
>
> You SURE that wasn't the April issue???

The glass does not cut like sheet metal. At best, the tin snips can
only cut little bits at a time.

The cutting, snapping, or other deliberate breaking of glass is best
done under water. As someone already noted, the water (kerosene
works okay too but much more expensive) slows down broken-off
glass pieces, is a much safer medium to do it in than in open air.

A Dremel "Moto-Tool" or equivalent is a good instrument to use to
both score glass for snapping off in straight lengths or to make the
medium-size holes in glass. A variety of caborundum tool bits are
found with Dremel accessory racks at do-it-yourself stores. I'd
suggest working with plastic photographic trays to hold the water
and the work (use a backing piece under the work). A variable
autotransformer might be handy since Dremel and equivalent tools
are high speed: Water tends to get very bubbly with high-speed
tools and it is hard to see where the tool is relative to the work.

Len Anderson
retired (from regular hours) electronic engineer person

4081. Re: Simulating crystal filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 04:54:41 UTC
From: averyfineman@aol.com
Message-ID: <20030615005441.18497.00000724@mb-m05.aol.com>
Source record: 34884

In article <bcddid$j3h$1@news.eunet.yu>, "Petar Ristic" <rileso@eunet.yu>
writes:

>My lapsus. Problem isn't in simulation, but in exact values and equivalent
>schematic for listed parts.
>
>Thanks.
>
>Reg Edwards <g4fgq.regp@btinternet.com> wrote in message
>news:bcd9c4$65g$1@titan.btinternet.com...
>> Draw the complete circuit diagram. For each crystal insert values of
>L,Cs,Cp
>> and R. Also values of L,C and R of any other associated components.
>>
>> Insert everything, including frequencies, in your network analysis
>computer
>> program, hit the start key and it's done.
>>
>> The big question is how will you know whether you get the right answers ?

One place for answers on internal R and C1 of quartz crystal units
is the Frequency Control Division of Corning. They have, under
their "Obsolete" web page, a number of graphs of those two internal
values over frequency, min-max, for most of their crystal units.

www.corningfrequency.com/obsolete.htm

Look for files starting with "C1_graphs..." or "Rmax_graphs..."
and select for the holder type given in filename.

Or, if you prefer the catalog, go to

www.corningfrequency.com/crystals.htm

The quartz crystal catalog is a 2.1 MB PDF file but the graphs
mentioned are links, can't be grabbed if off-line and your software
does not automatically grab the line and dial up.

Once you have C1 (usually in femtoFarads), you can calculate
the equivalent inductance from the series resonant frequency.
Rmax (series R) will then determine the equivalent Q of the
resonator.

A problem is the Co value. Corning gives many of its units a
value of "less than 7 pFd," not a firm bit of data. A better guess
at the parallel capacitance would be from a frequency counter
measured test oscillator adjustable to less than a percent, set

up to "look" for parallel resonance relative to the series resonance.

Considering that a series resonant circuit is inductive above resonance and, knowing the C1 and calculated L, it is a matter of calculation to determine Co from an accurate parallel resonance. Note: All who get their own data this way need at least 8 significant digits in their calculators and the frequency counter should resolve at least 10 Hz for 10 MHz crystal units.

Len Anderson
retired (from regular hours) electronic engineer person

4082. Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 12:11:30 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bchnnr$j4qvn$1@ID-150848.news.dfncis.de>
Source record: 34885
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Hi. I'm in UK.

I've got this hand-held radio. It runs off a 9.6v Ni-Cad battery that clips onto the radio proper. You have to slide the battery onto the bottom of the radio proper from the side. The battery slides into two grooves and there is a pip at the top of the battery that locks with a metal strip protruding from the bottom of the radio. I suspect this kind of battery fitting arrangement is pretty common. Anyone know it's proper type description?

Anyway, you shove a plug from the charger into the side of the the battery. I thought that when charging the battery and the battery was connected to the radio, I would be able to operate the radio, but you cannot. I think that is because the voltage is too high. The charger open circuit kicks out about 17v.

Anyway, there are two things I'm seeking:

Has anyone got a dud battery that will fit my radio? I want to empty it's contents and solder two wires to the contacts so I can power the radio from either a 9.6v power supply, or a made-up battery pack (I'm wanting 2300 maH capacity rather than 700 maH at present).

Secondly, can I buy a power supply for the radio, I mean something like a base unit that I slide onto the radio? I presume you can buy battery charging base units, but I need a power suply unit so I can run the hand-held off the mains.

TIA.

Rich

4083. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 12:18:19 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bcho2m$jbkp2$1@ID-150848.news.dfncis.de>
Source record: 34886
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Alasdair Baxter wrote:
> On Sun, 15 Jun 2003 13:11:30 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
>>I've got this hand-held radio
>
> Would you care to tell us what the make and model of the handheld is?

Yep. It's actually a marine radio that I got for receiving.

http://website.lineone.net/~phiadmarine/M198.htm

4084. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 12:33:22 UTC
From: Robert Maskill <robertmaskill@netscape.net>
Message-ID: <bchp35$j0t2m$2@ID-120025.news.dfncis.de>
Source record: 34887
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bcho2m$jbkp2$1@ID-150848.news.dfncis.de...
> Alasdair Baxter wrote:
> > On Sun, 15 Jun 2003 13:11:30 +0100, "Richard"
> > <nearlynews_email@ntlworld.com> wrote:
> >
> >>I've got this hand-held radio
> >
> > Would you care to tell us what the make and model of the handheld is?
>
> Yep. It's actually a marine radio that I got for receiving.
>
> http://website.lineone.net/~phiadmarine/M198.htm

From the picture it looks as though it might be a re-badged Icom Marine set.

If it is then I may have one kicking about somewhere and also a multi-way
drop in charger.

I will have a look when I get a few minutes.

--
Robert Maskill G4PYR
Peterborough Cambridgeshire
www.coastalradio.greater-peterborough.com

4085. I`m seeking some Access Point

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 12:44:02 UTC
From: : RaQi;
Message-ID: <3eec6a13@news.home.net.pl>
Source record: 34888

hallo all.

i`m seeking Access Point with AT76C510 (Atmel).
Can you give me informations about dealer ?

R,
--

4086. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 12:49:33 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bchpt8$j3suh$1@ID-150848.news.dfncis.de>
Source record: 34889
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Robert Maskill wrote:
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:bcho2m$jbkp2$1@ID-150848.news.dfncis.de...
>> Alasdair Baxter wrote:
>> > On Sun, 15 Jun 2003 13:11:30 +0100, "Richard"
>> > <nearlynews_email@ntlworld.com> wrote:
>> >
>> >>I've got this hand-held radio
>> >
>> > Would you care to tell us what the make and model of the handheld
>> > is?
>>
>> Yep. It's actually a marine radio that I got for receiving.
>>
>> http://website.lineone.net/~phiadmarine/M198.htm
>
> From the picture it looks as though it might be a re-badged Icom
> Marine set.
>
> If it is then I may have one kicking about somewhere and also a
> multi-way drop in charger.
>
> I will have a look when I get a few minutes.

Rog.

Well, as well as Swiftech on it, it might also be known as Silva Star.
Whatever, it is made really well. Looks like a cast metal body.

Was terribly dissapointed when I could not run the radio from the
battery when it is charging. :c(

Of course, I can charge the battery with the wall charger, but to get a
dud battery so I can run the radio off a homebrew PSU or a homebrew
battery power pack is what I'm after. Or, as mentioned, a base unit
that can run the radio (as oppossed to merely charging the battery),
but I'd be still after a dud battery. I only get 2.3 hours use of the
radio with the supplied battery, and that's on receive. Will get an 8
AA cell battery holder so I cam make up a battery of NiMh cells
giving about 200 or 2300 maH.

4087. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 13:56:44 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <veouovhhe82ge8@corp.supernews.com>
Source record: 34890

I'm not sure I understand or believe that tinsnips under water will cut glass but I'm willing to learn.
Glass is not a solid per se but a super cooled liquid.
I you lean a long piece against a wall it will sag over time...
A glass cutter has a very sharp point that scores the glass if enough pressure is applied..
The "scratch" is a stress concentration and the glass will break along the score line if stressed further..
The breaking stress should be applied as soon as possible after the glass is scored..
If you wait the stress caused by the scratch will diminsh as the supercooled liquid seeks equilibrium..
Now will someone educate me on how tinsnips underwater work!
hank wd5jfr

"J999w" <j999w@aol.com> wrote in message news:20030613175137.09979.00000496@mb-m26.aol.com...
> Okay, this gets down to the nitty gritty of homebrew.
>
> I noted in the July, 1961 QST, page 76, Hints and Kinks that you can cut plain
> window glass with a pair of tin snips ... if you do it under water. The editor
> noted: "Darned if it doesn't work!".
>
> Does it ??
>
> John Wilke
> WB9UAI

4088. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 14:28:46 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <Xns939B4C16B7DB8pookster@129.250.170.85>
Source record: 34893

scharkalvin <wa2mze@bellsouth.net> wrote in news:3EEBF8DA.1040805
@bellsouth.net:

> The dual nature of light as photons and waves applies to ALL
>electromagnetic radiation, which is what light IS!
>

When I first saw this theory about the "dual nature" of electromagnetic radiation, I thought to myself that was a code phrase for "we haven't really figured it out yet".

That was years ago, nothing has occurred to change my mind.

Keep searching, scientists.

--
Bill, W7TI

4089. homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 14:30:45 UTC
From: anandsaha@rediffmail.com
Message-ID: <bchvul$1tr$1@xuxa.iecc.com>
Source record: 34891
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

hi,

i want to check the output power of an fm transmitter, and i don't have a wattmeter. most of the wattmeters available in market here have a range of
0-50watt or 0-100 watt.
i want to design one, with a range of 0-2 watt approx, using the components available with me - digital multimeter(V,A,ohm), diodes, transistors, resistors and capacitors. someone please suggest me a design or point me to a schematic.

i am very much interested in designing a low power fm transmitter, yet all that i hit upon while searching the net are readymade schematics, which ofcourse work, yet i do not get the real idea of how it was designed. is there any good document about how to design an fm transmitter from scratch, given that "i need to transmitt an fm signal at 90Mhz with an output power of 2 watt". i would like to know how to design circuits for oscillators, pll, power booster, amplifier etc. and how to tweak them for getting the desired output.

please don't worry about the output power(2 watt as i mentioned). i know it's illegal, and i am not going to cause any damage. i just want to learn how to design. let me mention that i am very new to this subject.

thanks.
anand saha.

4090. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 14:41:29 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bci0dt$is34p$1@ID-150848.news.dfncis.de>
Source record: 34892
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:
> On Sun, 15 Jun 2003 13:49:33 +0100, "Richard"
> <nearlynews_email@ntlworld.com> pausing to cast envious glances at
> those who had mastered the skill of reading without moving their lips,
> wrote:
>
>>>> http://website.lineone.net/~phiadmarine/M198.htm
>
> On the right of the above web-page, you'll see mention of an external
> case for ni-cads @ ï¿½14.95.
>
> That's what you want. These are the same size as the ni-cad pack you
> have at the moment and just like that nicad pack, they clip into place
> on the bottom of the tcvr. The advantage of using one of those over
> a replacement ni-cad pack, is you can always replace any individual
> ni-cad cells that go duff, you can even install ni-Mh or even
> dry-cells in an emergency.
>
> Nick.

Yes, I see that now. Thanks.

Points:

Yes, I would imagine that you are right, that battery holder will be
just like my Ni_Cad battery pack, inasmuch as it will clip on.

Pity that I cannot get something like that that will hold 8 AA NiMh
batteries. I wonder if you can get holders that will take 8 AA. That
would be perfect, and perhaps the ideal battery solution. I must make
equiries/do some research.

Posibly I can get a duff Ni-Cad battery pack for next to zilch. Then I
use it as a connector to the radio with a home made battery pack or PSU.
I still need a PSU arrangement.

4091. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 15:27:19 UTC
From: Steve Uhrig <Steve@swssec.com>
Message-ID: <814pevcqngveccrn97pp6cocqdgrhja4k5@4ax.com>
Source record: 34894
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

On Sun, 15 Jun 2003 13:18:19 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>Yep. It's actually a marine radio that I got for receiving.

>http://website.lineone.net/~phiadmarine/M198.htm

The site lists an AA batt pack for 15 pounds, which you could adapt as
mentioned.

The site also lists a 12VDC accessory cord, which means there is some
way to feed the radio external 12VDC.

If the radio is some flavor of ICOM, it will have a 2.1/5.5mm coaxial
power connector usually on the top, center pin positive. This is a
very popular size connector, or you could buy cords already made up.

Using the 6xAA pack with throwaway lithiums would give you a
relatively large amount of power, and independence from mains power
for charging. And nearly forever shelf life. All these would be nice
features if you will use the thing in a marine application where
safety might be important.

Regards ... Steve

****
Steve Uhrig, SWS Security, Maryland (USA)
Mfrs of electronic surveillance equip
mailto:Steve@swssec.com website http://www.swssec.com
tel +1+410-879-4035, fax +1+410-836-1190
"In God we trust, all others we monitor"
****

4092. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 15:43:45 UTC
From: ogrowup@webtv.net
Message-ID: <19297-3EEC9431-187@storefull-2234.public.lawson.webtv.net>
Source record: 34896

Cruise a few flea markets & you might come across a "bottle cutter";
these were popular craft items in the 60's & 70's. My sister I each had
one; hers got a lot more use than mine did...

"This is one race of people [the Irish] for whom psychoanalysis is of no
use whatsoever."
Sigmund Freud

4093. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 16:01:25 UTC
From: fmmck@aol.com
Message-ID: <20030615120125.12195.00000955@mb-m04.aol.com>
Source record: 34895

<< i want to check the output power of an fm transmitter, and i don't have a wattmeter. most of the wattmeters available in market here have a range of
0-50watt or 0-100 watt.
i want to design one, with a range of 0-2 watt approx, >>

<< design an fm
transmitter from scratch, given that "i need to transmitt an fm signal at 90Mhz with an output power of 2 watt" >>

<< i
know it's illegal, and i am not going to cause any damage. i just want to learn how to design. let me mention that i am very new to this subject. >>

Anand-

You protest too much. This is a Ham Radio forum, so mention of a 90 MHz transmitter is like waving a red flag. Few will believe that you don't intend to transmit with it.

Are really trying to learn, or are you trying to get us to do your homework? Measuring low power may be as simple as using a diode detector to measure voltage across a 50 Ohm load, and calibrating the meter scale in watts. As a designer, you should be able to figure it out!

If you are serious, why not become a licensed Ham Radio operator, and design equipment that is legal to use? You can find a lot of interesting information at http://www.qrz.com, and even practice taking a Ham Radio exam at http://www.qrz.com/p/testing.pl.

73, Fred, K4DII

4094. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 16:55:53 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bci89t$jc35t$1@ID-150848.news.dfncis.de>
Source record: 34747
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Steve Uhrig wrote:
> On Sun, 15 Jun 2003 13:18:19 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
>>Yep. It's actually a marine radio that I got for receiving.
>
>>http://website.lineone.net/~phiadmarine/M198.htm
>
> The site lists an AA batt pack for 15 pounds, which you could adapt as
> mentioned.
>
> The site also lists a 12VDC accessory cord, which means there is some
> way to feed the radio external 12VDC.
>
> If the radio is some flavor of ICOM, it will have a 2.1/5.5mm coaxial
> power connector usually on the top, center pin positive. This is a
> very popular size connector, or you could buy cords already made up.
>
> Using the 6xAA pack with throwaway lithiums would give you a
> relatively large amount of power, and independence from mains power
> for charging. And nearly forever shelf life. All these would be nice
> features if you will use the thing in a marine application where
> safety might be important.
>
> Regards ... Steve

I don't understand this radio when it comes to working it off a mains
PSU.

On the side of the the Ni-Cad battery pack, not on the radio itself, is
a coaxial power connector. Next to it, it says "CHARGE/EXT.PWR. So,
you think that you can plug the wall charger into this socket and run
the radio off the mains, as well as I suppose charge the battery.

Well, you cannot. You get funny results with the radio when you do
that. Besides, it's not good surely to plug the charger into the
battery whenever you want to run the radio off the charger. You would
surely end up messing up the battery charging.

So, assuming that you cannot plug the wall charger into the battery and
run the radio off the mains, how do you run the radio off the mains?
There is no other way to get DC into the radio.

The only thing I can think off is that the charger puts out about 17v,
so you cannot run the radio from the charger, but if you supply anywhere

between 9 and say 12v into the socket on the battery you can run the radio. But that sound iffy, or maybe not. The text right next to the socket on the battery says, "CHARGE/EXT.PWR"

I just don't know how to run this radio off a PSU.

I must ask the supplier.

4095. MSP430 MOrse generation software

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 16:58:23 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <bci8jf$b9$1@titan.btinternet.com>
Source record: 34748

I've written some Morse generation software for the TI MSP430, which might be of interest to anyone else who is using these devices for amateur radio applications:

http://www.geocities.com/leon_heller/msp430_morse.html

It could do with some more bells and whistles, but it is quite usable for a beacon, and Morse readout for other applications.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4096. Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 17:30:03 UTC
From: krausemechanic@yahoo.com
Message-ID: <1eba1344.0306150930.3727e22f@posting.google.com>
Source record: 34749

Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!

4097. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 17:40:05 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bciat8$ji1p8$1@ID-150848.news.dfncis.de>
Source record: 34750
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:
> On Sun, 15 Jun 2003 17:55:53 +0100, "Richard"

> You may want to have a look at:
>
> http://www.seamarknunn.co.uk/catalog/items/item1746.htm
>
> Nick

I've got that exact kind of thing. And the plug end is exactly the same as with the wall charger.

Somehow, plugging in the wall charger to the socket is not an acceptable way to run the radio of the mains. The radio balks at that. But, if I were to connect the cord to a 12v battery, then the radio will not act up, and will operate okay. And I suppose the 12v in does not charge the battery.

As I say, all I can think of is that the 17v from the charger charges the battteries, but the radio balks, but 12v in, the radio works okay, but the batteries do not charge.

Am going to put radio to a 12v source and see what happens.

4098. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 17:52:44 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EECB37B.155BA8FC@rica.net>
Source record: 34751

Krausemechanic wrote:
>
> Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!

I would probably try a 6C5:
http://www.thetubestore.com/nos-6c5.html
--
John Popelish

4099. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 17:56:45 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bcibsg$jnh8i$1@ID-150848.news.dfncis.de>
Source record: 34752
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:

> Am going to put radio to a 12v source and see what happens.

Works fine.

Now I know. I cannot use the wall charger the run the radio. But if I put in an external 12 v source I'm okay.

4100. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 18:33:39 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bcie4s$iudod$1@ID-150848.news.dfncis.de>
Source record: 34753
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:

> You must use a 12V-13.8V psu capable of putting out at least 1A for
> running it as a receiver, or 3-4 Amps if you want to run it as a
> transceiver
>
> You cannot both charge your nicads and run the radio at the same time,
> with most of the cheaper PSUs

Yep, having the current does make a lot of difference.

I'm running the radio off a Farnell double PSU that's big and heavy, but max current is only 500mA. When I key the radio the voltage drops to about 7v and the current shows 600 mA. Obviously the PSU cannot cope when on transmit. Interestingly, the radio locks on transmit, probably not enough current so that when I take my thumb off the PTT, relays don't revert the rig to receive.

Am now in the market to buy a 12 or 13.8v PSU with a fair bit of current margin. 2A or perhaps 3A should do. Transmit curent is supposed to be 1.2A.

4101. FS: 1000's of TUBES, receiving, TV & special purpose @ very low prices.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 18:53:04 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <pe3Ha.28433$1e.9330@fed1read04>
Source record: 34754
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list.

4102. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 20:06:39 UTC
From: john graesser <graesser@tca.net>
Message-ID: <vepkd0gd9e1ab8@corp.supernews.com>
Source record: 34755
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:bchnnr$j4qvn$1@ID-150848.news.dfncis.de...
> Hi. I'm in UK.
>
> I've got this hand-held radio. It runs off a 9.6v Ni-Cad battery that
> clips onto the radio proper. You have to slide the battery onto the
> bottom of the radio proper from the side. The battery slides into two
> grooves and there is a pip at the top of the battery that locks with a
> metal strip protruding from the bottom of the radio. I suspect this kind
> of battery fitting arrangement is pretty common. Anyone know it's proper
> type description?
>
> Anyway, you shove a plug from the charger into the side of the the
> battery. I thought that when charging the battery and the battery was
> connected to the radio, I would be able to operate the radio, but you
> cannot. I think that is because the voltage is too high. The charger
> open circuit kicks out about 17v.

Are you saying that you can't recieve when the charger is hooked up? Or are
you saying that you can't transmit when the charger is hooked up?

Very few handheld chargers will supply enough current to operate in transmit
mode, but any should allow you to leave the radio on, in recieve mode.

Your charger may be the exception to the above, it may be just a trickle
charger, just putting a slow recharge into the battery. That way you could
leave the radio on the charger 24/7 unitil it was needed, then run off the
fully charged battery.

The 12v adapter that the site you got it from offers should be a high
current source, allowing you to run off of it, instead of the battery (it
will source as much or more current). It isn't a matter of voltage level, it
is more dependant on the amount of current flow as to operating it.
thanks, John.
KC5DWD

4103. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:01:34 UTC
From: hexter@blazenet.net
Message-ID: <vepnleb76jsfc3@corp.supernews.com>
Source record: 34756

In article <1eba1344.0306150930.3727e22f@posting.google.com>,
krausemechanic@yahoo.com says...
>
>Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!

You could try a 6AQ5, which is NOT pin for pin replacement, but is a
real nice tube to work with.

6C5 6C5 IS NOT even close!!

4104. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:03:19 UTC
From: hexter@blazenet.net
Message-ID: <vepnonn1ft0s1e@corp.supernews.com>
Source record: 34757

In article <3EECB37B.155BA8FC@rica.net>, jpopelish@rica.net says...
>
>Krausemechanic wrote:
>>
>> Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!
>
>I would probably try a 6C5:
>http://www.thetubestore.com/nos-6c5.html
>--
>John Popelish

6C5 probably would work if it had a few more grids, and maybe a differant
base. Next guess?

4105. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:14:57 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bcing1$jivo7$1@ID-150848.news.dfncis.de>
Source record: 34758
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:
> On Sun, 15 Jun 2003 19:33:39 +0100, "Richard"
> <nearlynews_email@ntlworld.com> pausing to cast envious glances at
> those who had mastered the skill of reading without moving their lips,
> wrote:
>
>>I'm running the radio off a Farnell double PSU that's big and heavy,
>>but max current is only 500mA. When I key the radio the voltage
>>drops to about 7v and the current shows 600 mA.
>
> You're running it into a dummy-load of course? Or you have a licence
> to transmit on marine frequencies? ;-)

Hehe. Dummy load. Of course!! :c)

> Just because that hand-held only needs 1.2A of current, that's no
> reason to skimp on the power supply. Buy at least a 3A and if your
> budget will run to a 5A, 8A or even higher, buy one of those.
> You never know what your next radio will require. :-)

Well, actually I want to take the radio to hol's where I can run it off
mains. So, I may just buy or make a 2.5A or 3A supply. Weight.

4106. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:18:29 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bcinmj$j454p$1@ID-150848.news.dfncis.de>
Source record: 34759
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

john graesser wrote:

> Very few handheld chargers will supply enough current to operate in
> transmit mode, but any should allow you to leave the radio on, in
> recieve mode.

Found out that is the case. I need a proper supply that supplies the
current on transmit.

4107. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:07 UTC
From: "L." <Tech@DP.NET>
Message-ID: <bcipq7qhf1@xuxa.iecc.com>
Source record: 34765
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

"anand" <anandsaha@rediffmail.com> wrote in message
news:bchvul$1tr$1@xuxa.iecc.com...
> hi,
>
> i want to check the output power of an fm transmitter, and i don't
> have a wattmeter. most of the wattmeters available in market here have
> a range of
> 0-50watt or 0-100 watt.
> i want to design one, with a range of 0-2 watt approx, using the
> components available with me - digital multimeter(V,A,ohm), diodes,
> transistors, resistors and capacitors. someone please suggest me a
> design or point me to a schematic.
>
> i am very much interested in designing a low power fm transmitter, yet
> all that i hit upon while searching the net are readymade schematics,
> which ofcourse work, yet i do not get the real idea of how it was
> designed. is there any good document about how to design an fm
> transmitter from scratch, given that "i need to transmitt an fm signal
> at 90Mhz with an output power of 2 watt". i would like to know how to
> design circuits for oscillators, pll, power booster, amplifier etc.
> and how to tweak them for getting the desired output.
>
> please don't worry about the output power(2 watt as i mentioned). i
> know it's illegal, and i am not going to cause any damage. i just want
> to learn how to design. let me mention that i am very new to this
> subject.
>
> thanks.
> anand saha.
>

Do you have any schematics for an RF probe? There are schematics out there for an RF probe which you can use on a VOM. You read the RF voltage on the output and use the formula P=E - squared / R (which should (in most cases) be 50 ohms - a standard dummy load). It will give you a ball park idea. Accuracy? Well, I've found it close enough for my uses and experiments with Wattmeters also have shown a close proximity.

Start out with a higher scale, say 40-50 VDC so as not to overload the meter. Can work down a level or two depending on voltage measured. I have an RF probe in my tool box to use on my VOM just in case I need to measure the RF voltage to get an idea of output, should I not have a wattmeter or dummy load with me. Even checking with the existing antenna, will give you an idea

of output.

An RF probe utilizes a diode, a cap or so and resistance. It may be frequency limited, so you have to watch that. The schematic will usually give the range limit, usually to 500 MHz. I've made a few with RG 58 cable, perf board cut to size, and a piece of aluminum tubing cut to size and drilled as needed. About $7 in parts and 1/2 hours work. Most of the parts may be in your junk box or found at Radio Shack.

L.

4108. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:08 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <bcipq8qhr1@xuxa.iecc.com>
Source record: 34762
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 15 Jun 2003 14:30:45 GMT, anandsaha@rediffmail.com (anand) wrote:

|please don't worry about the output power(2 watt as i mentioned). i
|know it's illegal, and i am not going to cause any damage. i just want
|to learn how to design. let me mention that i am very new to this
|subject.

Right, this is just a "design experiment." Except that you have a
particular frequency and power in mind, and you know it's illegal.

Why didn't you make the subject line, "Help me build an illegal
transmitter"?

I hope no one else aids and abets this activity, I sure won't.

4109. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bcipq8qhk1@xuxa.iecc.com>
Source record: 34763
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 15 Jun 2003 14:30:45 GMT, anandsaha@rediffmail.com (anand) wrote:

>hi,
>
>i want to check the output power of an fm transmitter, and i don't
>have a wattmeter. most of the wattmeters available in market here have
>a range of
>0-50watt or 0-100 watt.
>i want to design one, with a range of 0-2 watt approx, using the
>components available with me - digital multimeter(V,A,ohm), diodes,
>transistors, resistors and capacitors. someone please suggest me a
>design or point me to a schematic.
>
>i am very much interested in designing a low power fm transmitter, yet
>all that i hit upon while searching the net are readymade schematics,
>which ofcourse work, yet i do not get the real idea of how it was
>designed. is there any good document about how to design an fm
>transmitter from scratch, given that "i need to transmitt an fm signal
>at 90Mhz with an output power of 2 watt". i would like to know how to
>design circuits for oscillators, pll, power booster, amplifier etc.
>and how to tweak them for getting the desired output.
>
>please don't worry about the output power(2 watt as i mentioned). i
>know it's illegal, and i am not going to cause any damage. i just want
>to learn how to design. let me mention that i am very new to this
>subject.
>
>thanks.
>anand saha.

Hi Anand,

Your first problem is one of available voltage. Available from the transmitter, across the load, for the diode to then rectify and present to a meter for display. At 2W into 50Ohms you can at best develop:
P = E² / R
2 = E² / 50
E² = 2 * 50
E = 10V
This is far and away more than enough voltage to make the diode sing, as long as you use this meter AS the load. Trying to design a Wattmeter like an Amateur SWR meter (which is more versatile) would

lead to a design that attempts to use as little power going to the load as possible. You don't ask for that, so the Meter, AS load is appropriate, but then you need to ask yourself how much your real load appears to be like your Meter AS load (frequently not much at all).

Very few antennas offer a load of 50Ohms, which is simply the conventional value engineered into a system (your simple transmitter barely qualifies, and yet at some point it does have an output impedance and is driving a load of some input impedance - a system).

You should then build your Meter AS load with a value you can trust to be close to the actual value. For a ground plane style antenna this varies between 35 Ohms (with a flat radial design with around four spokes at 90° to the radiator, or 0° to the horizontal) and 50 Ohms (those same four spokes drooping at roughly 45° to the horizontal); or 70 Ohms for a dipole (vertical or horizontal) as long as they have been tuned to resonance (and now we return to the flexibility of the SWR meter which would allow you to determine this, but would be starved for power with only 2W available). Simple formulas for frequency and wire required to design these variations abound and you probably could trust them to be close enough. Download the free version of EZNEC and you will find them all and certainly within the means of the limitations imposed (for being free software) to determine those lengths for your self, to the materials at hand.

As for the detection portion of this we start with a 35/50/70 Ohm resistor. Connect this across the output of the transmitter (its antenna output connection and the chassis/ground or power supply common which is frequently the negative pole of the battery or lead of the supply).

Some cheap transmitters expect you to simply connect a whip to it and ignore that this point is also hot with supply voltage. As a precaution, insert a capacitor (one of the small disk types with a value of 0.001µF to 0.1µF) between that connector and the resistor. This capacitor will be invisible to the transmitter and the load (it won't matter).

I presume your meter is a solid state model from Radio Shack, but it could as easily be one with a needle that moves with input (probably found in a receding glacier). Either way, connect the negative lead to the common/chassis/ground described above.

Parallel connect an 1000 Ohm resistor (not critical - could be 620 or 2200) and another disk capacitor (not critical - like the one already described above) across the resistor. One side of this combination should go to the common/chassis/ground described above. The other side should go to the meter's free lead (the positive one).

You now have a lot of connections to common/chassis/ground and you have the 35/50/70 Ohm resistor being fed through a cap on one side (make sure the resistor can take 2W) and the meter with its circuitry

(specifically the +lead) isolated from it. Add a diode between these two points and you are complete: Resistor Load - Diode - +lead.

Apply power, measure voltage, apply Ohm's Law.

73's
Richard Clark, KB7QHC

4110. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:09 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bcipq9$qi2$1@xuxa.iecc.com>
Source record: 34764
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

"anand" <anandsaha@rediffmail.com> wrote in message
news:bchvul$1tr$1@xuxa.iecc.com...
> hi,
>
> i want to check the output power of an fm transmitter, and i don't
> have a wattmeter. most of the wattmeters available in market here have
> a range of
> 0-50watt or 0-100 watt.
> i want to design one, with a range of 0-2 watt approx, using the
> components available with me - digital multimeter(V,A,ohm), diodes,
> transistors, resistors and capacitors. someone please suggest me a
> design or point me to a schematic.
>
> i am very much interested in designing a low power fm transmitter, yet
> all that i hit upon while searching the net are readymade schematics,
> which ofcourse work, yet i do not get the real idea of how it was
> designed. is there any good document about how to design an fm
> transmitter from scratch, given that "i need to transmitt an fm signal
> at 90Mhz with an output power of 2 watt". i would like to know how to
> design circuits for oscillators, pll, power booster, amplifier etc.
> and how to tweak them for getting the desired output.
>
> please don't worry about the output power(2 watt as i mentioned). i
> know it's illegal, and i am not going to cause any damage. i just want
> to learn how to design. let me mention that i am very new to this
> subject.

Let's see, now, he wants to learn how to design an illegal transmitter, and
the existing readymade designs are no good to him. He wants a fairly
sophisticated design (pll). He wants us not to worry about his power level.

He's posting from a free account.

Anyone else hearing alarm bells ringing?

4111. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:11 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <bcipqbqip1@xuxa.iecc.com>
Source record: 34760
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 15 Jun 2003 14:30:45 GMT, anandsaha@rediffmail.com (anand) wrote:

>hi,
>
>i want to check the output power of an fm transmitter, and i don't
>have a wattmeter. most of the wattmeters available in market here have
>a range of
>0-50watt or 0-100 watt.
>i want to design one, with a range of 0-2 watt approx, using the
>components available with me - digital multimeter(V,A,ohm), diodes,
>transistors, resistors and capacitors. someone please suggest me a
>design or point me to a schematic.
>
>i am very much interested in designing a low power fm transmitter, yet
>all that i hit upon while searching the net are readymade schematics,
>which ofcourse work, yet i do not get the real idea of how it was
>designed. is there any good document about how to design an fm
>transmitter from scratch, given that "i need to transmitt an fm signal
>at 90Mhz with an output power of 2 watt". i would like to know how to
>design circuits for oscillators, pll, power booster, amplifier etc.
>and how to tweak them for getting the desired output.
>
>please don't worry about the output power(2 watt as i mentioned). i
>know it's illegal, and i am not going to cause any damage. i just want
>to learn how to design. let me mention that i am very new to this
>subject.
---
http://www.arrl.org/catalog/?item=1921

--
John Fields
Professional circuit designer
http://austininstruments.com

4112. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:14 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <bcipqe$qk5$1@xuxa.iecc.com>
Source record: 34766
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 15 Jun 2003 14:30:45 GMT, anandsaha@rediffmail.com (anand) wrote:

[...]

You have a *hell* of a lot to learn. Start with getting a grip of the
fundamentals, then get yourself this book: 'RF Circuit Design' by
Chris Bowick (Newnes). It's about as close as you can get to a
complete but concise manual on the subject.

4113. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 21:52:16 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <bcipqgqkm1@xuxa.iecc.com>
Source record: 34761
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

Assuming you know the value of the transmitter load resistance.

With the diode (preferably germanium or other low-forward-voltage diode) rectify the RF voltage across the load, bypass the RF component of the DC volts down to transmitter ground with a 10,000 pF capacitor. Connect a 2M-ohm 1/4-watt resistor across the capacitor.

With the high resistance digital voltmeter measure the DC volts across the capacitor. The measured DC voltage + diode forward volts will be equal to the PEAK RF voltage across the load.

Transmitter power output in watts = Squared(Peak RF Volts)/2/Load resistance.

The above circuit will work up to a measured DC voltage not more than the rated reverse voltage of the diode.

Reg, G4FGQ

4114. ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 23:27:36 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <veq07d2n0nfr8f@corp.supernews.com>
Source record: 34767
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

I am in need of a Schematic for a Trace Tiger Series TS-424E or any that are close to it. They are offering them on Ebay without telling the bidders what it is exactly. Would like to see if they can be modified to be useful here in the states. Willing to pay all copying shipping costs. Please contact me via email. Thanks Don KB6GQA

4115. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-15 23:56:07 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <rl7Ha.31729$ld7.24855@news2.east.cox.net>
Source record: 34768

I agree. 6AQ5 is a nice tube.

Pete

"gudmundur" <hexter@blazenet.net> wrote in message
news:vepnleb76jsfc3@corp.supernews.com...
> In article <1eba1344.0306150930.3727e22f@posting.google.com>,
> krausemechanic@yahoo.com says...
> >
> >Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!
>
> You could try a 6AQ5, which is NOT pin for pin replacement, but is a
> real nice tube to work with.
>
> 6C5 6C5 IS NOT even close!!
>

4116. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 00:40:43 UTC
From: mcalhoun@ksu.edu
Message-ID: <bcj3mb$86q@unix1.cc.ksu.edu>
Source record: 34769

>Can you please explaine to me what kind of tool a "pair of tin snips" is,
>I am from a part of the world where we do not have something by that name.

I just used a fairly heavy pair of paper-cutting scissors. As noted, one
really isn't CUTTING the glass but just causing little chips to flake off.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4117. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 00:55:21 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3EED1689.E27FF7B8@rica.net>
Source record: 34770

gudmundur wrote:
>
> In article <1eba1344.0306150930.3727e22f@posting.google.com>,
> krausemechanic@yahoo.com says...
> >
> >Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!
>
> You could try a 6AQ5, which is NOT pin for pin replacement, but is a
> real nice tube to work with.
>
> 6C5 6C5 IS NOT even close!!

Sorry, that was just a guess. A 6CU5 is a lot closer, including
pinout, I think.

--
John Popelish

4118. Cross-Needle Meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 10:21:59 UTC
From: Ricardo Martins <ct2gqv@hotmail.com>
Message-ID: <3eed9ab8$0$8305$4d4efb8e@read.news.pt.uu.net>
Source record: 34771

Hi,

I am trying to find an cross-needle meter manufacturer/reseller for
homebrewing an swr meter.

Any help is appreciated since Google doesn't fell's lucky...

73 de CT2GQV / Ricardo

4119. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 10:58:01 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bck7n6$jfsme$1@ID-150848.news.dfncis.de>
Source record: 34772
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:

> You must use a 12V-13.8V psu capable of putting out at least 1A for
> running it as a receiver, or 3-4 Amps if you want to run it as a
> transceiver

What gets me is when you use a 13.8 v PSU what is happenning to the
battery. Is it out of circuit or what?

4120. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 12:14:25 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <bckcb1$nv6$1@xuxa.iecc.com>
Source record: 34773
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

Alarm bells OMG

Do you really think if he was going to design something really illegal he
would be looking in here for help.

Come on guys give your head a shake.
The illegal stuff is available online, already built and tested for pocket
change....

Gerry

VE6QLT

"John R. Strohm" <strohm@airmail.net> wrote in message
news:bcipq9$qi2$1@xuxa.iecc.com...
> "anand" <anandsaha@rediffmail.com> wrote in message
> news:bchvul$1tr$1@xuxa.iecc.com...
> > hi,
> >
> > i want to check the output power of an fm transmitter, and i don't
> > have a wattmeter. most of the wattmeters available in market here have
> > a range of
> > 0-50watt or 0-100 watt.
> > i want to design one, with a range of 0-2 watt approx, using the
> > components available with me - digital multimeter(V,A,ohm), diodes,
> > transistors, resistors and capacitors. someone please suggest me a
> > design or point me to a schematic.
> >
> > i am very much interested in designing a low power fm transmitter, yet
> > all that i hit upon while searching the net are readymade schematics,
> > which ofcourse work, yet i do not get the real idea of how it was
> > designed. is there any good document about how to design an fm
> > transmitter from scratch, given that "i need to transmitt an fm signal
> > at 90Mhz with an output power of 2 watt". i would like to know how to
> > design circuits for oscillators, pll, power booster, amplifier etc.
> > and how to tweak them for getting the desired output.
> >
> > please don't worry about the output power(2 watt as i mentioned). i
> > know it's illegal, and i am not going to cause any damage. i just want
> > to learn how to design. let me mention that i am very new to this
> > subject.
>
> Let's see, now, he wants to learn how to design an illegal transmitter,
> and

> the existing readymade designs are no good to him. He wants a fairly
> sophisticated design (pll). He wants us not to worry about his power
level.
>
> He's posting from a free account.
>
> Anyone else hearing alarm bells ringing?
>
>
>

4121. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 12:14:31 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <bckcb8$o2e$1@xuxa.iecc.com>
Source record: 34775
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 15 Jun 2003 21:52:09 GMT, "John R. Strohm" <strohm@airmail.net>
wrote:

>Let's see, now, he wants to learn how to design an illegal transmitter, and
>the existing readymade designs are no good to him. He wants a fairly
>sophisticated design (pll). He wants us not to worry about his power level.
>
>He's posting from a free account.
>
>Anyone else hearing alarm bells ringing?

Not sure about alarm bells at 2W., although I concede there's still a
possibility for mischieve-making at that low power. What's actually on
90Mhz? Might give us a clue...

4122. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 12:14:32 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <bckcb8$o39$1@xuxa.iecc.com>
Source record: 34774
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

Wes

Lighten up a little, have you never had a class assignment in your life.
Lets at least cut the guy a little slack.
With a little help in the subject this novice may go on to become a great
engineer, at least he's interested at this point.
Why are you so afaid that someone might give him information that is readily
available online??

There are worse things he could be doing with his time !!!

Gerry
VE6QLT

"Wes Stewart" <n7ws@!#!arrl.net> wrote in message
news:bcipq8qhr1@xuxa.iecc.com...
> On 15 Jun 2003 14:30:45 GMT, anandsaha@rediffmail.com (anand) wrote:
>
>
> |please don't worry about the output power(2 watt as i mentioned). i
> |know it's illegal, and i am not going to cause any damage. i just want
> |to learn how to design. let me mention that i am very new to this
> |subject.
>
>
> Right, this is just a "design experiment." Except that you have a
> particular frequency and power in mind, and you know it's illegal.
>
> Why didn't you make the subject line, "Help me build an illegal
> transmitter"?
>
> I hope no one else aids and abets this activity, I sure won't.
>

4123. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 13:48:07 UTC
From: w4pqwhs@aol.com
Message-ID: <20030616094807.04360.00001117@mb-m06.aol.com>
Source record: 34776

Get a radio amateurs handbook ,it has all that and more...I never saw a good engineer that did not have an ARRL handbook in his file..W4PQW

4124. Re: Cross-Needle Meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 14:37:08 UTC
From: redmondj <redmondj@concentric.net>
Message-ID: <3EEDD6CC.6070200@concentric.net>
Source record: 34777

Ricardo,

I have several Daiwa cross needle meter movements. They are $7.50 each plus shipping. The scales are 2KW forward and 200 watts reverse and the VSWR scale in the middle.

If you are looking for a quantity, they are manufactured in Japan and it may be Daiwa that makes them. If not, I can probably find the manufacturer.

Regards,

Alan - K6RFK

Ricardo Martins wrote:

>Hi,
>
>I am trying to find an cross-needle meter manufacturer/reseller for
>homebrewing an swr meter.
>
>Any help is appreciated since Google doesn't fell's lucky...
>
>73 de CT2GQV / Ricardo
>
>

4125. Re: Calc. Ladder-filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 15:39:57 UTC
From: msix@oldplato.nmia.com
Message-ID: <hxlHa.226$B5.62@fe01.atl2.webusenet.com>
Source record: 34778

P. wrote:
>Hi,
>just trying to build a 8-pole Ladder-filter for a QRP Rig.
>Even if selected out of 30 pcs., the frequencies of the crystals differ
>siginicantly (up to 150 Hz).
>TNX , Pedro, DF3YB
What I do is put a mini 3-30 pF trimmer in series with each cap
and tune them all to same freq...
73 W7ZFB

4126. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 16:05:17 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <bckprt$s44$1@xuxa.iecc.com>
Source record: 34779
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 16 Jun 2003 12:14:31 GMT, Paul Burridge
<redscar@waitrose.notformail.com> wrote:
| What's actually on
|90Mhz? Might give us a clue...

Can you say "FM broadcast band"?

4127. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 16:05:19 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bckprv$s4i$1@xuxa.iecc.com>
Source record: 34781
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

"Paul Burridge" <redscar@waitrose.notformail.com> wrote in message
news:bckcb8$o2e$1@xuxa.iecc.com...
> On 15 Jun 2003 21:52:09 GMT, "John R. Strohm" <strohm@airmail.net>
> wrote:
>
>
> >Let's see, now, he wants to learn how to design an illegal transmitter,
and
> >the existing readymade designs are no good to him. He wants a fairly
> >sophisticated design (pll). He wants us not to worry about his power
level.
> >
> >He's posting from a free account.
> >
> >Anyone else hearing alarm bells ringing?
>
> Not sure about alarm bells at 2W., although I concede there's still a
> possibility for mischieve-making at that low power. What's actually on
> 90Mhz? Might give us a clue...

Paul, 88-108 MHz is the U.S. FM broadcast band.

HOWEVER, he also said he wanted a PLL design. You don't use a PLL design
for a single-channel transmitter. You use a PLL design for a synthesized
transmitter, that can go ANYWHERE in the band.

I can think of a few interesting things I could do with a 2W synthesized
transmitter. Running a pirate radio station is only one of them.

4128. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 16:05:20 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <bckps0$s52$1@xuxa.iecc.com>
Source record: 34780
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 16 Jun 2003 12:14:31 GMT, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>Not sure about alarm bells at 2W., although I concede there's still a
>possibility for mischieve-making at that low power. What's actually on
>90Mhz? Might give us a clue...

The space between 89.9MHz and 90.1MHz on the commercial FM broadcast
band.

http://w4zt.com/freqs/

--
John Fields
Professional circuit designer
http://austininstruments.com

4129. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 16:05:21 UTC
From: Wes Stewart <n7ws@!#!arrl.net>
Message-ID: <bckps1$s5b$1@xuxa.iecc.com>
Source record: 34782
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 16 Jun 2003 12:14:32 GMT, "Gerry MacDonald"
<gerry.macdonald@globaltv.ca> wrote:

|Wes
|
|Lighten up a little, have you never had a class assignment in your life.

Yes. But I did the work myself and didn't do my "research" by asking
questions on the Internet. I actually read books, looked at data
sheet and performed calculations and experiments.

|Lets (sic) at least cut the guy a little slack.

You cut him slack, leave me out of it.

|With a little help in the subject this novice may go on to become a great
|engineer, at least he's interested at this point.

Could be. If he would do the work himself, he would be even better.

|Why are you so afaid that someone might give him information that is readily
|available online??

If it's already available, let him look for it, _I'm_ not giving it to
him.

4130. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 16:21:56 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <bckqmd$jmm7q$1@ID-150848.news.dfncis.de>
Source record: 34783
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

lucifer@eternal-flames.gov wrote:
> On Mon, 16 Jun 2003 11:58:01 +0100, "Richard"
> <nearlynews_email@ntlworld.com> pausing to cast envious glances at
> those who had mastered the skill of reading without moving their lips,
> wrote:
>
>>What gets me is when you use a 13.8 v PSU what is happenning to the
>>battery. Is it out of circuit or what?
>
> Yep.
>
> It saves a lot of banging.
>
> Nick.

Okay.

I just don't know how it's done.

Put 17v into the socket at the side of battery and it charges the
Ni-Cads. Put 13.8v or 12v and battery not charged. Must be diode in
that battery pack.

Rich.

4131. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 17:58:30 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3EEE0546.6F4A0554@nf.sympatico.ca>
Source record: 34784

Max wrote:
>
> Hello Alexander
>
> > They're basically a pair of scissors for cutting sheet metal, long handles
> > (15") and short (3") sturdy blades. One type is known as "Aviation snips"
> in
> > some parts.
>
> Thank's for info, I know exactly what kind of tool it is, I am a educated as
> a smith,
> and that kind of cutters is well known here where I live. The problem is
> that
> sometime it is difficult to translate things like that to a non english
> language.
>
> Regards Max

Sheet Metal Shears might be another? Terry.

4132. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 18:13:24 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0306161013.62650cb8@posting.google.com>
Source record: 34785

John Popelish <jpopelish@rica.net> wrote in message news:<3EED1689.E27FF7B8@rica.net>...
> gudmundur wrote:
> >
> > In article <1eba1344.0306150930.3727e22f@posting.google.com>,
> > krausemechanic@yahoo.com says...
> > >
> > >Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!
> >
> > You could try a 6AQ5, which is NOT pin for pin replacement, but is a
> > real nice tube to work with.
> >
> > 6C5 6C5 IS NOT even close!!
>
> Sorry, that was just a guess. A 6CU5 is a lot closer, including
> pinout, I think.

Yep, 6CU5 is the one. In your defense, there are other *C5s that
are like the 50C5, e.g. the 12V version is the 12C5/12CU5. It's one
of those cases where the 6V version of a tube number is different than
the other-volt versions (as I discovered when I bought some 12L6s
sight-unseen years ago, thinking how clever I was!).

73,
Mike, KK6GM

4133. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 18:13:40 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3EEE08D4.13C76340@nf.sympatico.ca>
Source record: 34786

John Popelish wrote:
>
> Krausemechanic wrote:
> >
> > Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!
>
> I would probably try a 6C5:

Nah! 6C5 is an octal audio triode.

50C5 is a typical AC/DC audio output tube common in the 1950s
etc.

Prob looking for something with 7 pin base?

4134. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-16 23:50:39 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <vesluo49cvpsf5@corp.supernews.com>
Source record: 34787
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

I have just been informed that Trace Inverter Company will not give support to any person who wishes to sevices their own equipment. You must send it into the service center and pay someone else to do the necessary repairs. I have a Trace TS (Tiger Series) inverter which I wish to repair and only requested a schematic. They seem to be so afraid of somone stealing some design secrets that they will not help.

I for one will think twice before using any of their products in the future

It has been my experience that the ones most affraid of someone cheating them, are themselves the ones most likely to cheat. I wonder if that holds true with companies too. Can anyone out there help me in locating a schematic? Will gladly pay all reasonabie costs. Please respond to my email address Thanks Don Smith

4135. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 02:07:26 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3EEE77B4.B07FE41D@earthlink.net>
Source record: 34788
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

Don Smith wrote:
>
> I have just been informed that Trace Inverter Company will not give support
> to any person who wishes to sevices their own equipment. You must send it
> into the service center and pay someone else to do the necessary repairs. I
> have a Trace TS (Tiger Series) inverter which I wish to repair and only
> requested a schematic. They seem to be so afraid of somone stealing some
> design secrets that they will not help.
>
> I for one will think twice before using any of their products in the future
>
> It has been my experience that the ones most affraid of someone cheating
> them, are themselves the ones most likely to cheat. I wonder if that holds
> true with companies too. Can anyone out there help me in locating a
> schematic? Will gladly pay all reasonabie costs. Please respond to my
> email address Thanks Don Smith

Its a matter of liability. If they help you do a poor repair job and
someone gets hurt, they can be sued for millions of dollars. No one who
makes inverters or large power supplies passes out the information
freely. Go ahead and buy a different brand, then try to get a manual.
Good luck tilting at windmills.
--

Michael A. Terrell
Central Florida

4136. Re: Clip on battey: Your assistance required.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 02:54:20 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EEE82EF.4970652D@bellatlantic.net>
Source record: 34789
Cross-posted to: alt.radio.scanner,rec.radio.amateur.homebrew,uk.radio.amateur

Richard wrote:
>
> lucifer@eternal-flames.gov wrote:
> > On Mon, 16 Jun 2003 11:58:01 +0100, "Richard"
> > <nearlynews_email@ntlworld.com> pausing to cast envious glances at
> > those who had mastered the skill of reading without moving their lips,
> > wrote:
> >
> >>What gets me is when you use a 13.8 v PSU what is happenning to the
> >>battery. Is it out of circuit or what?
> >
> > Yep.
> >
> > It saves a lot of banging.
> >
> > Nick.
>
> Okay.
>
> I just don't know how it's done.
>
> Put 17v into the socket at the side of battery and it charges the
> Ni-Cads. Put 13.8v or 12v and battery not charged. Must be diode in
> that battery pack.
>
> Rich.

Rich,

I think it ought to charge from a 13.8 volt PSU with no problem.

4137. FS: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 08:03:40 UTC
From: servis_za_elektroniku@yahoo.com
Message-ID: <71725543.0306170003.45a9d995@posting.google.com>
Source record: 34790
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Used, working Philips QB5/1750 (50 USD/piece).

More info on:

http://www.geocities.com/servis_za_elektroniku/My_page.html

4138. FS: Valves ECC83

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 08:12:55 UTC
From: servis_za_elektroniku@yahoo.com
Message-ID: <71725543.0306170012.4115bfc8@posting.google.com>
Source record: 34791
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Brand NEW, ECC83 made by EI (Yugoslaiva) by Philips license, 13 USD.

More info on:

http://www.geocities.com/servis_za_elektroniku/My_page.html

4139. Easy Receiver Noise Figure Calculating

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 09:10:53 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <96mtev0quvoqe9fu55eoo6rpjjk2lg3va3@4ax.com>
Source record: 34792

Hi.

You want a free Noise Figure calculator windows proggy and would like to try out a beta version here you go ...

<http://www.nospagetti.co.uk/receiver_nf.zip>

I think I still have a problem with the formulas but let me know if you think I'm wildly wrong :)

I'm fed up with drawing things out on paper and going thru it all on a calculator so I thought I'd try to make it somewhat easier for myself.

Thought I'd release it as freeware as well incase it holds any interest for anyone else.

Sorry theirs no help but all you do is right click on the design area to add/delete, left click the blocks to edit them.

I might release the source code as well, will wait till I got things right.

Regards

Clive

4140. Re: Valves ECC83

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 09:31:34 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <B6MHa.3160$J41.308181@newsfep2-win.server.ntli.net>
Source record: 34802
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

"Servis za elektroniku &#65533;" <servis_za_elektroniku@yahoo.com> wrote in message
news:71725543.0306170012.4115bfc8@posting.google.com...
> Brand NEW, ECC83 made by EI (Yugoslaiva) by Philips license, 13 USD.
>
> More info on:
>
> http://www.geocities.com/servis_za_elektroniku/My_page.html
==========
FYI , Langrex Supplies Ltd -Croydon ,Surry -UK sell brand new ECC83 for
GBP 4.00 =US$ 6.- (approx)
I have no connection with the above company ,but just saw their ad in a
magazine.

Frank GM0CSZ / KN6WH

4141. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 12:21:47 UTC
From: "L." <Tech@DP.NET>
Message-ID: <bcn14rsfd1@xuxa.iecc.com>
Source record: 34793
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

Oh yeah, I forgot, IF he is using a dummy load or an antenna short of required length such as for a low power "Carrier Current" type Radio station of an FM variety, he would be completely legal. He didn't really specify his end result other than learning. For all we know, he could end up on a frequency where no license is needed anyhow.. And if so, what is the big deal? Two watts max FM, isn't going to do a hell of a lot. L.

"Gerry MacDonald" <gerry.macdonald@globaltv.ca> wrote in message
news:bckcb1$nv6$1@xuxa.iecc.com...
> Alarm bells OMG
>
> Do you really think if he was going to design something really illegal he
> would be looking in here for help.
>
> Come on guys give your head a shake.
> The illegal stuff is available online, already built and tested for
pocket
> change....
>
>
> Gerry
>
> VE6QLT
>
> "John R. Strohm" <strohm@airmail.net> wrote in message
> news:bcipq9$qi2$1@xuxa.iecc.com...
> > "anand" <anandsaha@rediffmail.com> wrote in message
> > news:bchvul$1tr$1@xuxa.iecc.com...
> > > hi,
> > >
> > > i want to check the output power of an fm transmitter, and i don't
> > > have a wattmeter. most of the wattmeters available in market here have
> > > a range of
> > > 0-50watt or 0-100 watt.
> > > i want to design one, with a range of 0-2 watt approx, using the
> > > components available with me - digital multimeter(V,A,ohm), diodes,
> > > transistors, resistors and capacitors. someone please suggest me a
> > > design or point me to a schematic.
> > >
> > > i am very much interested in designing a low power fm transmitter, yet
> > > all that i hit upon while searching the net are readymade schematics,
> > > which ofcourse work, yet i do not get the real idea of how it was
> > > designed. is there any good document about how to design an fm

> > > transmitter from scratch, given that "i need to transmitt an fm signal
> > > at 90Mhz with an output power of 2 watt". i would like to know how to
> > > design circuits for oscillators, pll, power booster, amplifier etc.
> > > and how to tweak them for getting the desired output.
> > >
> > > please don't worry about the output power(2 watt as i mentioned). i
> > > know it's illegal, and i am not going to cause any damage. i just want
> > > to learn how to design. let me mention that i am very new to this
> > > subject.
> >
> > Let's see, now, he wants to learn how to design an illegal transmitter,
> and
> > the existing readymade designs are no good to him. He wants a fairly
> > sophisticated design (pll). He wants us not to worry about his power
> level.
> >
> > He's posting from a free account.
> >
> > Anyone else hearing alarm bells ringing?
> >
> >
> >
>
>

4142. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 12:21:54 UTC
From: "L." <Tech@DP.NET>
Message-ID: <bcn152shn1@xuxa.iecc.com>
Source record: 34795
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

You can say that again! The flood gates have been opened long before this guy happened by. At least he admits to his actions and seems to understand any consequences. If he is using it to learn as he says, and isn't planning to cause RF interference, more power to him. At least he is honest about it.

L.

"Gerry MacDonald" <gerry.macdonald@globaltv.ca> wrote in message news:bckcb1$nv6$1@xuxa.iecc.com...
> Alarm bells OMG
>
> Do you really think if he was going to design something really illegal he
> would be looking in here for help.
>
> Come on guys give your head a shake.
> The illegal stuff is available online, already built and tested for pocket
> change....
>
>
> Gerry
>
> VE6QLT
>
> "John R. Strohm" <strohm@airmail.net> wrote in message
> news:bcipq9$qi2$1@xuxa.iecc.com...
> > "anand" <anandsaha@rediffmail.com> wrote in message
> > news:bchvul$1tr$1@xuxa.iecc.com...
> > > hi,
> > >
> > > i want to check the output power of an fm transmitter, and i don't
> > > have a wattmeter. most of the wattmeters available in market here have
> > > a range of
> > > 0-50watt or 0-100 watt.
> > > i want to design one, with a range of 0-2 watt approx, using the
> > > components available with me - digital multimeter(V,A,ohm), diodes,
> > > transistors, resistors and capacitors. someone please suggest me a
> > > design or point me to a schematic.
> > >
> > > i am very much interested in designing a low power fm transmitter, yet
> > > all that i hit upon while searching the net are readymade schematics,
> > > which ofcourse work, yet i do not get the real idea of how it was
> > > designed. is there any good document about how to design an fm

> > > transmitter from scratch, given that "i need to transmitt an fm signal
> > > at 90Mhz with an output power of 2 watt". i would like to know how to
> > > design circuits for oscillators, pll, power booster, amplifier etc.
> > > and how to tweak them for getting the desired output.
> > >
> > > please don't worry about the output power(2 watt as i mentioned). i
> > > know it's illegal, and i am not going to cause any damage. i just want
> > > to learn how to design. let me mention that i am very new to this
> > > subject.
> >
> > Let's see, now, he wants to learn how to design an illegal transmitter,
> and
> > the existing readymade designs are no good to him. He wants a fairly
> > sophisticated design (pll). He wants us not to worry about his power
> level.
> >
> > He's posting from a free account.
> >
> > Anyone else hearing alarm bells ringing?
> >
> >
> >
>
>

4143. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 12:21:55 UTC
From: Paul Burridge <redscar@waitrose.notformail.com>
Message-ID: <bcn153$si2$1@xuxa.iecc.com>
Source record: 34794
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 16 Jun 2003 16:05:19 GMT, "John R. Strohm" <strohm@airmail.net>
wrote:

>
>Paul, 88-108 MHz is the U.S. FM broadcast band.

D'oh!
I can't believe I didn't clock that. It's the same here in europe. All
the major broadcast stations. Sheesh!
:-(

4144. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 12:21:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bcn155sim1@xuxa.iecc.com>
Source record: 34796
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

On 16 Jun 2003 12:14:31 GMT, Paul Burridge
<redscar@waitrose.notformail.com> wrote:

>On 15 Jun 2003 21:52:09 GMT, "John R. Strohm" <strohm@airmail.net>
>wrote:
>
>
>>Let's see, now, he wants to learn how to design an illegal transmitter, and
>>the existing readymade designs are no good to him. He wants a fairly
>>sophisticated design (pll). He wants us not to worry about his power level.
>>
>>He's posting from a free account.
>>
>>Anyone else hearing alarm bells ringing?
>
>Not sure about alarm bells at 2W., although I concede there's still a
>possibility for mischieve-making at that low power. What's actually on
>90Mhz? Might give us a clue...

This end of the FM band is traditionally set aside for Schools. The
FCC explicitly describes some transmission modes as being dormitory
oriented (although not at 2W). I am a longtime listener of KEXP/KCMU
90.3MHz. The KEXP is a vanity call linking it to Paul Allen's EMP
music pavilion (more than a shrine to Jimmy Hendrix). KEXP is one of
the leading internet broadcasters with community volunteer DJ's and
nearly 30% of their operating revenues covered through internet
pledges. In fact, the Seattle area consistently shows in the top 10
of popular internet broadcasters (3. KING classical, 6. KPLU jazz).

73's
Richard Clark, KB7QHC

4145. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 15:33:22 UTC
From: "Maarten A.E.Bakker" <maarten@panic.et.tudelft.nl>
Message-ID: <bcncc2$96t$2@news.tudelft.nl>
Source record: 34797
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

In sci.electronics.repair Michael A. Terrell <mike.terrell@earthlink.net> wrote:
> Its a matter of liability. If they help you do a poor repair job and
> someone gets hurt, they can be sued for millions of dollars. No one who
> makes inverters or large power supplies passes out the information
> freely. Go ahead and buy a different brand, then try to get a manual.
> Good luck tilting at windmills.

Has this idiotic sueing thing really gone that far? I think that means
there should not be schematics available for any equipment at all, which
is clearly not the case. Anyway, would not a disclaimer in the service
manual be enough to circumvent this?

I am more inclined to go with the 'proprietary crap' explanation of this
phenomenon.

Met vriendelijke groet,

Maarten Bakker.

4146. Re: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 17:37:39 UTC
From: Steve <no-one@home.here>
Message-ID: <AhIHa.1932$Gf1.629999@newsfep1-win.server.ntli.net>
Source record: 34798
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Servis za elektroniku &#65533; <servis_za_elektroniku@yahoo.com> wrote in message
news:71725543.0306170003.45a9d995@posting.google.com...
> Used, working Philips QB5/1750 (50 USD/piece).
>
> More info on:
>
> http://www.geocities.com/servis_za_elektroniku/My_page.html

Just to save anyone else's time, there's more items for sale, but not more
info on that one.

Steve

4147. Re: homebrew wattmeter for measuring transmitter output power

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 20:03:22 UTC
From: "L." <Tech@DP.NET>
Message-ID: <bcns6a$q5$1@xuxa.iecc.com>
Source record: 34799
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.broadcasting,sci.electronics.design

In my haste, I improperly stated a thought. It should have read "or a short antenna (required length or less) such as for a low power "Carrier Current" type radio station......."

Any one familiar with CC stations should know the antenna has to be kept a certain maximum length to limit radiation of the signal. IF that requirement is met, then they are in compliance - with no license needed. If memory serves me correct, I believe it to be 10' maximum. Seems to me too, that the figure also included the feed line.

One more thing, what is the big deal if he was posting from a "free account". Big deal! Sorry, but that party said or appears to have done - nothing - to warrant a federal case or spark a major concern. As Gerry pointed out, illegal amps and radios are a dime a dozen. You can find them most anywhere - hamfest, internet, you name it. This person's research is peanuts compared to the real situation.

L.

"L." <Tech@DP.NET> wrote in message news:bcn14rsfd1@xuxa.iecc.com...
> Oh yeah, I forgot, IF he is using a dummy load or an antenna short of
> required length such as for a low power "Carrier Current" type Radio
station
> of an FM variety, he would be completely legal. He didn't really specify
his
> end result other than learning. For all we know, he could end up on a
> frequency where no license is needed anyhow.. And if so, what is the big
> deal? Two watts max FM, isn't going to do a hell of a lot. L.
>
> "Gerry MacDonald" <gerry.macdonald@globaltv.ca> wrote in message
> news:bckcb1$nv6$1@xuxa.iecc.com...
> > Alarm bells OMG
> >
> > Do you really think if he was going to design something really illegal
he
> > would be looking in here for help.
> >
> > Come on guys give your head a shake.
> > The illegal stuff is available online, already built and tested for
> pocket
> > change....
> >
> >
> > Gerry

> >
> > VE6QLT
> >
> > "John R. Strohm" <strohm@airmail.net> wrote in message
> > news:bcipq9$qi2$1@xuxa.iecc.com...
> > > "anand" <anandsaha@rediffmail.com> wrote in message
> > > news:bchvul$1tr$1@xuxa.iecc.com...
> > > > hi,
> > > >
> > > > i want to check the output power of an fm transmitter, and i don't
> > > > have a wattmeter. most of the wattmeters available in market here
have
> > > > a range of
> > > > 0-50watt or 0-100 watt.
> > > > i want to design one, with a range of 0-2 watt approx, using the
> > > > components available with me - digital multimeter(V,A,ohm), diodes,
> > > > transistors, resistors and capacitors. someone please suggest me a
> > > > design or point me to a schematic.
> > > >
> > > > i am very much interested in designing a low power fm transmitter,
yet
> > > > all that i hit upon while searching the net are readymade
schematics,
> > > > which ofcourse work, yet i do not get the real idea of how it was
> > > > designed. is there any good document about how to design an fm
> > > > transmitter from scratch, given that "i need to transmitt an fm
signal
> > > > at 90Mhz with an output power of 2 watt". i would like to know how
to
> > > > design circuits for oscillators, pll, power booster, amplifier etc.
> > > > and how to tweak them for getting the desired output.
> > > >
> > > > please don't worry about the output power(2 watt as i mentioned). i
> > > > know it's illegal, and i am not going to cause any damage. i just
want
> > > > to learn how to design. let me mention that i am very new to this
> > > > subject.
> > >
> > > Let's see, now, he wants to learn how to design an illegal
transmitter,
> > and
> > > the existing readymade designs are no good to him. He wants a fairly
> > > sophisticated design (pll). He wants us not to worry about his power
> > level.
> > >
> > > He's posting from a free account.
> > >
> > > Anyone else hearing alarm bells ringing?
> > >

4148. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 21:23:10 UTC
From: Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbev1lu.ba7.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 34800

On Sun, 15 Jun 2003 08:56:44 -0500, Henry Kolesnik <wd5jfr@oklahoma.net> wrote:
> Glass is not a solid per se but a super cooled liquid.

Myth. From an old post:

see: http://www.google.com/search?hl=en&q=glass+liquid+legend

Such as:
http://www.ualberta.ca/~bderksen/antique.html
which also references:
http://www.ualberta.ca/~bderksen/florin.html
and see also:
http://www.urbanlegends.com/science/glass.flow/origins_of_claim.html
http://math.ucr.edu/home/baez/physics/General/Glass/glass.html

And from Science News, Vol. 153, No. 22, May 30, 1998, p. 341
http://www.sciencenews.org/sn_arc98/5_30_98/fob3.htm

''Edgar Dutra Zanotto of the Federal University of Sao Carlos in
Brazil calculated the time needed for viscous flow to change the
thickness of different types of glass by a noticeable amount.
Cathedral glass would require a period "well beyond the age of the
universe," he says. ''

'''"At first, I thought that the [sagging window idea] was a
Brazilian myth," Zanotto wrote, but he soon learned that people all
over the world share the belief. Repeated in reference books, in
science classes, and recently over the Internet, the idea has been
repeatedly pulled out to explain ripply windows in old houses. "For
the layperson, it makes a lot of sense," says LaCourse.''

''The study demonstrates dramatically what many scientists had
reasoned earlier. "You would have to bring normal glass to 350?
Celsius in order to begin to see changes," says William C. LaCourse,
assistant director of the NSF Industry-University Center for Glass
Research at Alfred (N.Y.) University.''

''The origins of the stained glass myth are unclear, but the
confusion probably arose from a misunderstanding of the amorphous
atomic structure of glass, in which atoms do not assume a fixed
crystal structure. "The structure of the liquid and the structure of
the [solid] glass are very similar," says LaCourse, "but
thermodynamically they are not the same."''

''Glass does not have a precise freezing point; rather, it has
what's known as a glass transition temperature, typically a few
hundred degrees Celsius. Cooled below this temperature, liquid glass

retains its amorphous structure yet takes on the physical properties
of a solid rather than a supercooled liquid. ''

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4149. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 21:54:31 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vev3grcj573maf@corp.supernews.com>
Source record: 34801

6AQ5, it's a stronger tube and plentiful..
hank wd5jfr
"Krausemechanic" <krausemechanic@yahoo.com> wrote in message
news:1eba1344.0306150930.3727e22f@posting.google.com...
> Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!

4150. My xtal radio project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 21:55:03 UTC
From: TC Dufresne <tdufresne@neb.rr.com>
Message-ID: <X6MHa.90367$Xl.1544151@twister.rdc-kc.rr.com>
Source record: 34803

I just finished my latest project-a 5 band SW crystal radio. It was tons of fun, I have found myself getting more cautious and careful as I build more and more. This one was really fun, albeit expensive for a xtal radio rig, but "honey, it doesn't use any expensive batteries!" Boy, if I could just explain my Radio Shack bills now.

Anyway, for those who are interested, you can see my work at http://home.neb.rr.com/tdufres/econoceanic.html

As with any projects, your feedback/info would be helpful.

I have a few questions of my own. I use as the author suggested a powered amplifier/speaker (Radio Shack 277-1008C-5K ohms input impedance). Can one measure the "power output" to the amplifier, given an old Health 'scope, and minimal expertise with same, and has anyone else ever got selectivity improved? What about other types of diodes? I am currently using a 1N34A "Radio Shack 276-1123" basic.

Just a few ideas to kick around. What a real thrill hearing Deutsch Welles and Radio China last night!

73's

Tom

KC0GXX

4151. TS-617B/U ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 21:59:18 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vev3pq4adtlp42@corp.supernews.com>
Source record: 34804

Anyone know anything about this replacement for the Boonton 260-A Q Meter?
I'd like to find one and or a manual.
tnx
hank wd5jfr

4152. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 22:00:12 UTC
From: Peter Gottlieb <178048316@icq.net>
Message-ID: <MbMHa.6655$Y32.2586282@news4.srv.hcvlny.cv.net>
Source record: 34805
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

The lawyers drove the decision not to give out schematics at APC. Everyone
in Engineering knew it was a simple matter to reverse-engineer a unit if
someone really wanted a schematic bad enough. Some of the Matrix power
boards were potted, but this was a safety issue and was only done as a last
resort as it made the boards unrepairable.

"Maarten A.E.Bakker" <maarten@panic.et.tudelft.nl> wrote in message
news:bcncc2$96t$2@news.tudelft.nl...
> In sci.electronics.repair Michael A. Terrell <mike.terrell@earthlink.net>
wrote:
> > Its a matter of liability. If they help you do a poor repair job and
> > someone gets hurt, they can be sued for millions of dollars. No one who
> > makes inverters or large power supplies passes out the information
> > freely. Go ahead and buy a different brand, then try to get a manual.
> > Good luck tilting at windmills.
>
> Has this idiotic sueing thing really gone that far? I think that means
> there should not be schematics available for any equipment at all, which
> is clearly not the case. Anyway, would not a disclaimer in the service
> manual be enough to circumvent this?
>
> I am more inclined to go with the 'proprietary crap' explanation of this
> phenomenon.
>
> ---
> Met vriendelijke groet,
>
> Maarten Bakker.

4153. Pyramid PS-26K Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 22:17:39 UTC
From: Ed Williams <sunset392@cox.net>
Message-ID: <4sMHa.14036$PY2.12000@lakeread05>
Source record: 34806

HI All,

I have been given a Pyramid PS-26K power sypply that is non-operational and I am looking for a schematic for the unit. If anyone has one that they could email me I would be very thankful. If you can assist please email me at the below address.

sunset@exis.net

73 de KN4KL ed

4154. FA: Greenlee 3/8" round punch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 22:49:05 UTC
From: K4MT <garyh@bellsouth.net>
Message-ID: <aLMHa.967$bG.897@fe04.atl2.webusenet.com>
Source record: 34807

Found this in my tool box and do not need it. Great for homebrewers!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3031179973

4155. Re: My xtal radio project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 22:50:52 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vev6qgn1i89afc@corp.supernews.com>
Source record: 34808

Nice looking job, you should be proud, of it and your web site. I built a similar one in the 1950s and use plug in coils using old tube bases as support forms. I even put up a 500 foot antenna to get more stations. One thing I notice in your schematic is the absence of a RF filter cap, I think I had about 100 uufd. That might help. I lived in Alberta and one time picked up HCJB and was elated. I finally gave up on the trying different cat whiskers and other detectors. My next set was a one tube super regen and it blew the socks off the crystal radio. With a 50 foot antenna I could nearly always hear HCJB pl;us numerous others. You can probably reuse your coils and go to the next step. After that it was couple more regens then converting WW2 surplus receivers. Now I'm playing with a Cubic R-3030A.
Regards
Hank wd5jfr
"TC Dufresne" <tdufresne@neb.rr.com> wrote in message
news:X6MHa.90367$Xl.1544151@twister.rdc-kc.rr.com...
> I just finished my latest project-a 5 band SW crystal radio. It was tons
of
> fun, I have found myself getting more cautious and careful as I build more
> and more. This one was really fun, albeit expensive for a xtal radio rig,
> but "honey, it doesn't use any expensive batteries!" Boy, if I could just
> explain my Radio Shack bills now.
>
> Anyway, for those who are interested, you can see my work at
> http://home.neb.rr.com/tdufres/econoceanic.html
>
> As with any projects, your feedback/info would be helpful.
>
> I have a few questions of my own. I use as the author suggested a powered
> amplifier/speaker (Radio Shack 277-1008C-5K ohms input impedance). Can one
> measure the "power output" to the amplifier, given an old Health 'scope,
and
> minimal expertise with same, and has anyone else ever got selectivity
> improved? What about other types of diodes? I am currently using a 1N34A
> "Radio Shack 276-1123" basic.
>
> Just a few ideas to kick around. What a real thrill hearing Deutsch
Welles
> and Radio China last night!
>
> 73's
>
> Tom
>
> KC0GXX

>
>

4156. Test Do not read

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-17 23:12:36 UTC
From: ritchi50@optonline.net
Message-ID: <r28vevcvpg0iep7c55bu9pkjaoa8l2rvtl@4ax.com>
Source record: 34809

[No readable article body recovered]

4157. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 02:53:23 UTC
From: Woody <spamho@att.net>
Message-ID: <MPG.19599e41f27a5be4989684@netnews.worldnet.att.net>
Source record: 34810

<<SNIPPED>>
> =======
> On this topic , I would like to use part of a glass bottle or jar as a
> 'chimney ' for a RF Power Valve (tube).
> This requires the bottle or jar to be cut removing its bottom and neck.
> Has anybody on this NG done this (probably for a different reason) and how.
> Note : I have heard that 'official chimneys' are made of pyrex glass, best
> suitable for high temperatures .
>
> Frank GM0CSZ / KN6WH
>

Beware of some bottles/jars, temperatures from the valve|tube could cause
it to (sort of) explode, especially if heated non-uniformely. If I
recall pyrex has a lower coefficient of expansion. Quartz and sapphire
are even better, but $$!

I would go with the lantern glass suggestion.

73,
Woody

http://woody.white.home.att.net/
Homebrew Electronics
Ham Radio
Ecectic Scanning Electron Microscope Images

4158. Re: Test Do not read

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 03:50:25 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.null>
Message-ID: <MPG.1959815b35ce2c7898990b@192.168.42.131>
Source record: 34811

In article <r28vevcvpg0iep7c55bu9pkjaoa8l2rvtl@4ax.com>, ritchi50
@optonline.net says...

Too late. I read it.

What happens now?

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

4159. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 06:49:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vf02s2f0d93b13@corp.supernews.com>
Source record: 34812

I agree that the lantern chimney idea sounds good. It seems to me that you could also modify a Pyrex beaker. These are available in a wide variety of sizes. I recall in chemistry class heating Pyrex to red heat with a bunsen burner, then forming it as desired. I'd think that with a little practice you could reshape or remove the bottom while leaving the rest of the flask intact. I recently saw a bunch of flasks on ebay -- I'll bet that beakers are common there, too.

I'd always wear safety glasses when messing with glass of any kind.

Roy Lewallen, W7EL

Woody wrote:
> <<SNIPPED>>
>
>>=======
>>On this topic , I would like to use part of a glass bottle or jar as a
>>'chimney ' for a RF Power Valve (tube).
>>This requires the bottle or jar to be cut removing its bottom and neck.
>>Has anybody on this NG done this (probably for a different reason) and how.
>>Note : I have heard that 'official chimneys' are made of pyrex glass, best
>>suitable for high temperatures .
>>
>>Frank GM0CSZ / KN6WH
>>
>
>
> Beware of some bottles/jars, temperatures from the valve|tube could cause
> it to (sort of) explode, especially if heated non-uniformely. If I
> recall pyrex has a lower coefficient of expansion. Quartz and sapphire
> are even better, but $$!
>
> I would go with the lantern glass suggestion.
>
> 73,
> Woody
>
> http://woody.white.home.att.net/
> Homebrew Electronics
> Ham Radio
> Ecectic Scanning Electron Microscope Images

4160. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 08:06:19 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0306180006.6c5d0e0a@posting.google.com>
Source record: 34813

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:<vev3grcj573maf@corp.supernews.com>...
> 6AQ5, it's a stronger tube and plentiful..
> hank wd5jfr

One thing that needs to be considered is the B+ available. The 50C5 family will deliver more power than the 6AQ5 at low voltages (<150V), since that's what it was designed to do, while the 6AQ5 will deliver more at higher voltages (> ~200). To get that greater output at low B+ the 50C5 family also needs about three times the heater power of the 6AQ5.

73,
Mike, KK6GM

4161. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 09:17:07 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7aWHa.9$Gm3.151@newsfep2-win.server.ntli.net>
Source record: 34814

> > On this topic , I would like to use part of a glass bottle or jar as a
> > 'chimney ' for a RF Power Valve (tube).
> > This requires the bottle or jar to be cut removing its bottom and neck.
> > Has anybody on this NG done this (probably for a different reason) and
how.
> > Note : I have heard that 'official chimneys' are made of pyrex glass,
best
> > suitable for high temperatures .
> >
> > Frank GM0CSZ / KN6WH
> >
>
> Beware of some bottles/jars, temperatures from the valve|tube could cause
> it to (sort of) explode, especially if heated non-uniformely. If I
> recall pyrex has a lower coefficient of expansion. Quartz and sapphire
> are even better, but $$!
>
> I would go with the lantern glass suggestion.
=========
Yes I'll try to get suitable lantern glasses for the few QY4-400 (similar
to the US 4-400) tubes I have.
On the other hand the chimney should NOT get hot because of the stream of
cooling air between chimney and tube.
Upon loss of air flow ,detected by a low pressure switch sensing the
pressure of the enclosed chassis below the tube ,the amplifier will trip. I
wonder if the tube (no longer powered-up) would still be able to radiate
sufficient heat to overheat the chimney (were it made from a jar) .
BTW the chassis will be pressurised by a suitable centrifugal fan previously
used for the same purpose.

Frank GM0CSZ / KN6WH

4162. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 12:18:30 UTC
From: krausemechanic@yahoo.com
Message-ID: <1eba1344.0306180418.496af96d@posting.google.com>
Source record: 34815

krausemechanic@yahoo.com (Krausemechanic) wrote in message
news:<1eba1344.0306150930.3727e22f@posting.google.com>...
> Can someone suggest a 6 volt replacement for the 50C5 audio tube? Thanks!

Thanks everyone for the suggestions...i had totally forgotten the ole
6AQ5...it should fill the bill perfectly. Now if i could just find a
Heath gr-81 in the $10 price range.....

4163. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 13:42:31 UTC
From: Ted Winkler <ted@ccrtc.com>
Message-ID: <3EF06C47.1010005@ccrtc.com>
Source record: 34816
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

Also the do not want people to find out how easy they are to fix when
the information is there. Lib. is not the driving force selling new
ones is.

Peter Gottlieb wrote:
> The lawyers drove the decision not to give out schematics at APC. Everyone
> in Engineering knew it was a simple matter to reverse-engineer a unit if
> someone really wanted a schematic bad enough. Some of the Matrix power
> boards were potted, but this was a safety issue and was only done as a last
> resort as it made the boards unrepairable.
>
>
>
>
> "Maarten A.E.Bakker" <maarten@panic.et.tudelft.nl> wrote in message
> news:bcncc2$96t$2@news.tudelft.nl...
>
>>In sci.electronics.repair Michael A. Terrell <mike.terrell@earthlink.net>
>
> wrote:
>
>>> Its a matter of liability. If they help you do a poor repair job and
>>>someone gets hurt, they can be sued for millions of dollars. No one who
>>>makes inverters or large power supplies passes out the information
>>>freely. Go ahead and buy a different brand, then try to get a manual.
>>>Good luck tilting at windmills.
>>
>>Has this idiotic sueing thing really gone that far? I think that means
>>there should not be schematics available for any equipment at all, which
>>is clearly not the case. Anyway, would not a disclaimer in the service
>>manual be enough to circumvent this?
>>
>>I am more inclined to go with the 'proprietary crap' explanation of this
>>phenomenon.
>>
>>---
>>Met vriendelijke groet,
>>
>> Maarten Bakker.
>
>
>

4164. Re: Substitute Fire Bottle

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 14:27:03 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bcptau$jlt@library1.airnews.net>
Source record: 34817

"Mike Silva" <snarflemike@yahoo.com> wrote in message
news:20619edc.0306180006.6c5d0e0a@posting.google.com...
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:<vev3grcj573maf@corp.supernews.com>...
> > 6AQ5, it's a stronger tube and plentiful..
> > hank wd5jfr
>
> One thing that needs to be considered is the B+ available. The 50C5
> family will deliver more power than the 6AQ5 at low voltages (<150V),
> since that's what it was designed to do, while the 6AQ5 will deliver
> more at higher voltages (> ~200). To get that greater output at low
> B+ the 50C5 family also needs about three times the heater power of
> the 6AQ5.

This is a very good point.

The 50C5 (and a few others) were designed specifically for use in cheap
radios that DIDN'T use a power transformer. They had to run the plates off
of rectified, filtered line voltage.

4165. Re: Cutting glass ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 19:13:56 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <vf1eftgojiic19@corp.supernews.com>
Source record: 34818

I was not aware that old stained glsss windows were thicker at the bottom
that top....
I do know that a long glass rod leaning against the wall will curve over
time and I also know that if you want to make a good glass cut after
scribing a line you better do it quick or the stresses will be relieved.
I'd be interested in how these 2 observations fit with the new theories of
glass. I'd sure like to know becasuse I took Materials Science in like 1963
and maybe there are better explanations..
My reolution of your nosapm email address may not work, but I tried..
tnx
hank wd5jfr
"Sylvan Butler" <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid> wrote in
message
news:slrnbev1lu.ba7.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid...
> On Sun, 15 Jun 2003 08:56:44 -0500, Henry Kolesnik <wd5jfr@oklahoma.net>
wrote:
> > Glass is not a solid per se but a super cooled liquid.
>
> Myth. From an old post:
>
> see: http://www.google.com/search?hl=en&q=glass+liquid+legend
>
> Such as:
> http://www.ualberta.ca/~bderksen/antique.html
> which also references:
> http://www.ualberta.ca/~bderksen/florin.html
> and see also:
> http://www.urbanlegends.com/science/glass.flow/origins_of_claim.html
> http://math.ucr.edu/home/baez/physics/General/Glass/glass.html
>
> And from Science News, Vol. 153, No. 22, May 30, 1998, p. 341
> http://www.sciencenews.org/sn_arc98/5_30_98/fob3.htm
>
> ''Edgar Dutra Zanotto of the Federal University of Sao Carlos in
> Brazil calculated the time needed for viscous flow to change the
> thickness of different types of glass by a noticeable amount.
> Cathedral glass would require a period "well beyond the age of the
> universe," he says. ''
>
> ''"At first, I thought that the [sagging window idea] was a
> Brazilian myth," Zanotto wrote, but he soon learned that people all
> over the world share the belief. Repeated in reference books, in
> science classes, and recently over the Internet, the idea has been
> repeatedly pulled out to explain ripply windows in old houses. "For

> the layperson, it makes a lot of sense," says LaCourse.''
>
> ''The study demonstrates dramatically what many scientists had
> reasoned earlier. "You would have to bring normal glass to 350?
> Celsius in order to begin to see changes," says William C. LaCourse,
> assistant director of the NSF Industry-University Center for Glass
> Research at Alfred (N.Y.) University.''
>
> ''The origins of the stained glass myth are unclear, but the
> confusion probably arose from a misunderstanding of the amorphous
> atomic structure of glass, in which atoms do not assume a fixed
> crystal structure. "The structure of the liquid and the structure of
> the [solid] glass are very similar," says LaCourse, "but
> thermodynamically they are not the same."''
>
> ''Glass does not have a precise freezing point; rather, it has
> what's known as a glass transition temperature, typically a few
> hundred degrees Celsius. Cooled below this temperature, liquid glass
> retains its amorphous structure yet takes on the physical properties
> of a solid rather than a supercooled liquid. ''
>
> sdb
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
> sbutler-boi.hp.com

4166. Re: help with Avantek YIG osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 19:28:32 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <42b1fv0lIns9hrpbpmucivaqn0n6djvrk1@4ax.com>
Source record: 34819

On Fri, 13 Jun 2003 15:13:12 +0000 (UTC), DJ Wang
<djwang@redeye.mmrrcc.upenn.edu> wrote:

>
>Hi,
>I am looking for info on this Avantek YIG OSC. Its
>Part number is S09-1358 and covers 4-8GHz.
>It has three coil windings with roughly 1, 11 and
>132 ohm. It seems that the one with 11 ohm reading is
>the main tuning coil. There are 8 pins arranged in a
>circular manner around the SMA connector. Any help
>would be appreciated to figure out the pinouts,
>voltage, and coil currents and polarities. Much
>Thanks.
>
>DJ / NM3R

I have a book with Avantek YIG oscillators from 1989. No such part number is listed -- maybe its a part number for a customer.

Most of the pin-outs seem similar. Here's an attempt at a description. Arrange the Osc so the SMA output connector is at the bottom (6 on a clock face). Rest of pins with approx locations by clock face times:

6:00 - sma out
8:00 - +15 V
10:00 - -5 or +5V
11:00 - +FM
11:30 - -FM
12:30 - +Tune
1:00 - -Tune
2:00 - Heater
4:00 - Heater

Some have a ground terminal at 3:00 or 9:00. Ground should be obvious because no insulation from case. Some have a ground off of the sma flange.

A few have no pin for -5 or +5V. Assuming yours has one I'd guess it would be -5V. I'd hook up an adjustable power source and measure current. Ramp it up slowly and see what current does. If current shoots up fast or doesn't move, you may have reversed connection. Specs for 4-8GHz oscillators I have listed are 60 mA on -5V.

I'd use the same technique for +15V. Different Osc listed in this frequency range draw 40, 150, or 200mA.

They will work without heater but it makes the YIG more stable. Most heaters are 20-28 VDC.

Current through the tune coil determines frequency. My listings show 15 MHz/mA or 20 MHz/mA, so tuning range for 4-6 GHz would be 266-533 mA. or 200/400 mA.

You can run without the FM coil or use it for fine tuning. Specs I have: 310kHz/mA.

I never heard of a YIG with more than 2 coils. I assume one of the things you measured is the heater. Comparing a similar device, 1 ohm would be FM, 11 Tune, 132 heater. The -5 or +5 connection is probably the biggest gamble. On all the listing I see for 4-8 GHz devices it seems to be -5V. Proper specs for your YIG would be better but if you feel lucky this may get you going. You don't know what it was used in, do you?

-Rex, KK6MK

4167. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 21:43:55 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <bcqmea$qc5$1@news.oregonstate.edu>
Source record: 34820

scharkalvin <wa2mze@bellsouth.net> wrote:
> Now if waves are photons and photons are waves and photons are particles
> this leads to some interresting stuff. First it seems that photons DO
> have some
> mass, or at least a mass equalivant.

It's 'safer,' perhaps, to say that photons have _momentum_, because otherwise you start having to talk about 'rest mass' and otherwise start opening up various paradoxes. Hmm... I imagine I must have been asked to do it in a physics class at some point in time, but it'd be interesting to compute the force on your body exerted by a high power radio signal. :-)

> Does this means that when you walk
> through a
> door you emerge on the other side as a difraction pattern? Maybe!

I always liked the idea that, hey, if you try to walk through a _closed_ door enough times, sooner or later (like, many many lifetimes of the universe later, statistically), at some point you'll make it through entirely via tunneling. Of course, far more likely would be that you end up partially inside the door, and that doesn't seem pleasant at all... :-)

---Joel Kolstad

4168. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-18 22:27:11 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <Xns939E9D32939D2pookster@129.250.170.85>
Source record: 34821

"Joel Kolstad" <JKolstad71HatesSpam@Yahoo.Com> wrote in news:bcqmea$qc5$1
@news.oregonstate.edu:

> Of course, far more likely would be that you end up
> partially inside the door, and that doesn't seem pleasant at all... :-)
>

I believe that's what happened to Al Gore.

--
Bill, W7TI

4169. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 00:38:01 UTC
From: Peter Gottlieb <178048316@icq.net>
Message-ID: <JB7Ia.16002$Y32.7220873@news4.srv.hcvlny.cv.net>
Source record: 34822
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

I doubt it. These are mass-market items and techie-types who might want to repair their own unit are an insignificant percentage of the market. Believe what you want, but outside repairs affecting sales was simply not considered to have any significance.

Actually, they were tricky to fix, with lots of discrete components, control loops, etc. We had some amazing techs who could track down just about anything, but we also had lots of units where the fets blew up while attempting to repair them.

"Ted Winkler" <ted@ccrtc.com> wrote in message
news:3EF06C47.1010005@ccrtc.com...
> Also the do not want people to find out how easy they are to fix when
> the information is there. Lib. is not the driving force selling new
> ones is.
>
> Peter Gottlieb wrote:
> > The lawyers drove the decision not to give out schematics at APC.
Everyone
> > in Engineering knew it was a simple matter to reverse-engineer a unit if
> > someone really wanted a schematic bad enough. Some of the Matrix power
> > boards were potted, but this was a safety issue and was only done as a
last
> > resort as it made the boards unrepairable.
> >
> >
> >
> >
> > "Maarten A.E.Bakker" <maarten@panic.et.tudelft.nl> wrote in message
> > news:bcncc2$96t$2@news.tudelft.nl...
> >
> >>In sci.electronics.repair Michael A. Terrell
<mike.terrell@earthlink.net>
> >
> > wrote:
> >
> >>> Its a matter of liability. If they help you do a poor repair job
and
> >>someone gets hurt, they can be sued for millions of dollars. No one
who
> >>makes inverters or large power supplies passes out the information
> >>freely. Go ahead and buy a different brand, then try to get a manual.
> >>Good luck tilting at windmills.

> >>
> >>Has this idiotic sueing thing really gone that far? I think that means
> >>there should not be schematics available for any equipment at all, which
> >>is clearly not the case. Anyway, would not a disclaimer in the service
> >>manual be enough to circumvent this?
> >>
> >>I am more inclined to go with the 'proprietary crap' explanation of this
> >>phenomenon.
> >>
> >>---
> >>Met vriendelijke groet,
> >>
> >> Maarten Bakker.
> >
> >
> >
>

4170. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 01:00:39 UTC
From: the Wiz <look@message.body>
Message-ID: <ml22fvkesnk5kgndnsk1p0s1vld7l3t98l@4ax.com>
Source record: 34823
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

Maybe it's a matter of size - the 40KVA inverter that was installed at a local
telecom network lab came with complete schematics and parts lists.

"Michael A. Terrell" <mike.terrell@earthlink.net> wrote:

>Don Smith wrote:
>>
>> I have just been informed that Trace Inverter Company will not give support
>> to any person who wishes to sevices their own equipment. You must send it
>> into the service center and pay someone else to do the necessary repairs. I
>> have a Trace TS (Tiger Series) inverter which I wish to repair and only
>> requested a schematic. They seem to be so afraid of somone stealing some
>> design secrets that they will not help.
>>
>> I for one will think twice before using any of their products in the future
>>
>> It has been my experience that the ones most affraid of someone cheating
>> them, are themselves the ones most likely to cheat. I wonder if that holds
>> true with companies too. Can anyone out there help me in locating a
>> schematic? Will gladly pay all reasonabie costs. Please respond to my
>> email address Thanks Don Smith
>
> Its a matter of liability. If they help you do a poor repair job and
>someone gets hurt, they can be sued for millions of dollars. No one who
>makes inverters or large power supplies passes out the information
>freely. Go ahead and buy a different brand, then try to get a manual.
>Good luck tilting at windmills.

More about me: http://thelabwiz.home.mindspring.com/
VB3 source code: http://thelabwiz.home.mindspring.com/vbsource.html
VB6 source code: http://thelabwiz.home.mindspring.com/vb6source.html
VB6 - MySQL how to: http://thelabwiz.home.mindspring.com/mysql.html
Drivers for Pablo graphics tablet and JamCam cameras: http://home.earthlink.net/~mwbt/
johnecarter atat mindspring dotdot com. Fix the obvious to reply by email.

4171. Zenith Compainion 6G601M

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 01:06:00 UTC
From: TC Dufresne <tdufresne@neb.rr.com>
Message-ID: <Y%7Ia.96453$Xl.1624946@twister.rdc-kc.rr.com>
Source record: 34824

Hi:
Just cleaned up the rig and it looks like someone has been here before. I put it on the bench and it seems like I have 117V AC practically everywhere. It looks like someone replaced some caps, and also the power cord, but nothing else. It doesn't "light up" or produce any sounds I have limited knowledge of things radio (see previous posts) but can perform minor adjustments. DO I need to just "tweak" somewhere or am I looking at a major restoration?
Your suggestions appreciated... Peter W are you out there?
Tom

4172. Re: ISO Trase TS series inverter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 04:32:54 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3EF13CD5.7C0DA2C3@earthlink.net>
Source record: 34825
Cross-posted to: alt.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.misc,sci.electronics.repair

the Wiz wrote:
>
> Maybe it's a matter of size - the 40KVA inverter that was installed at a local
> telecom network lab came with complete schematics and parts lists.
>
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote:
>
> >Don Smith wrote:
> >>
> >> I have just been informed that Trace Inverter Company will not give support
> >> to any person who wishes to sevices their own equipment. You must send it
> >> into the service center and pay someone else to do the necessary repairs. I
> >> have a Trace TS (Tiger Series) inverter which I wish to repair and only
> >> requested a schematic. They seem to be so afraid of somone stealing some
> >> design secrets that they will not help.
> >>
> >> I for one will think twice before using any of their products in the future
> >>
> >> It has been my experience that the ones most affraid of someone cheating
> >> them, are themselves the ones most likely to cheat. I wonder if that holds
> >> true with companies too. Can anyone out there help me in locating a
> >> schematic? Will gladly pay all reasonabie costs. Please respond to my
> >> email address Thanks Don Smith
> >
> > Its a matter of liability. If they help you do a poor repair job and
> >someone gets hurt, they can be sued for millions of dollars. No one who
> >makes inverters or large power supplies passes out the information
> >freely. Go ahead and buy a different brand, then try to get a manual.
> >Good luck tilting at windmills.
>

That UPS is a capital investment, not a cheap, throw it under the
desk unit like 99% of the UPSs in service. And as you said, It came
with them. Equipment that is shipped without manuals generally means
you won't be able to get them.

Track down a full set of manuals for the L3-Com RCB-2000 telemetry
system, and tell me how many people you had to knock down to get them
out of the plant. They won't even give the test techs a full set of
size E schematics, and there is no service manual. If there was, it
would fill half of a drawer in a file cabinet.
--

Michael A. Terrell
Central Florida

4173. Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 15:09:16 UTC
From: kalin <kalin@tnet.com.au>
Message-ID: <3ef1d21c$0$59951$c30e37c6@lon-reader.news.telstra.net>
Source record: 34826

Hi all
I am planning to build a receiver using an aluminium chassis.
Would like to give a coating/treatment of the chassis
without affecting the electrical properties of the aluminium.
Any suggestions as to how to go about it are much appreciated.
TIA

4174. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 15:18:37 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <hvkIa.33156$vq.6343@sccrnsc04>
Source record: 34827

> I am planning to build a receiver using an aluminium chassis.
> Would like to give a coating/treatment of the chassis
> without affecting the electrical properties of the aluminium.
> Any suggestions as to how to go about it are much appreciated.
> TIA
>
> Iriite, also called yellow chromate. Passivates the surface without insulating it like anodizing does.

W4ZCB
>

4175. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 16:56:45 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <2oq3fv42k7ltiff5ug07pd93eq2a02ica7@4ax.com>
Source record: 34828

On Thu, 19 Jun 2003 15:18:37 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>> I am planning to build a receiver using an aluminium chassis.
>> Would like to give a coating/treatment of the chassis
>> without affecting the electrical properties of the aluminium.
>> Any suggestions as to how to go about it are much appreciated.
>> TIA
>>
>> Iriite, also called yellow chromate. Passivates the surface without
>insulating it like anodizing does.
>
>W4ZCB
>>
You could also mask critical areas where you need metal contact, and
then do epoxy paint, perhaps with a primer.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4176. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 17:59:40 UTC
From: k7itm@aol.com
Message-ID: <3200347.0306190959.145dda7b@posting.google.com>
Source record: 34829

c.a.m@antijunk3.blueyonder.co.uk wrote in message
news:<47nmevg34hpnqf0g0t5nf3oigcbh3gcjrc@4ax.com>...
> >What are the minimum number of photons that today's technology can detect...
>
> One photon.
>
>
> >What detectors are availble at a reasonable price for home experiments?
>
> Not sure, I can across a web site earlier this week that had detectors that can
> detect just one photon, or at least that's what it said, god knows where it was
> though, I've since cleared out my cache :(

Sure, you can count photons with a photomultiplier tube if the rate is
low enough. You don't count every photon that strikes the
photocathode, generally, but you can see individual photon events.
>
>
> I find it weird though, at what frequency do radio waves become photons ? ...
> assuming the scientists have figured things out ok, though some say light ways
> are not photons and are still waves, guess the debates still out.

Richard Feynman has some interesting comments about this. Try to
think of it this way: when you think of a "particle" you are thinking
probably of some solid thing like a billiard ball, and when you think
of a "wave" you are probably thinking of waves in water or something
similar. The problem with that is that electromagnetic radiation is
just electromagnetic radiation, nothing more nor less, and IS NOT
balls and IS NOT waves like in water. It is what it is, and behaves
in its own way. We have ways of observing it which we can relate to
"waves" and to "particles" but we must understand that those are
crutches for us.

He does a much better job explaining it...I think it's one of the
lectures in the series marketed as "Six Easy Pieces".

"Photons" of 1MHz electromagnetic radiation are extremely hard to
detect as individual events because they contain such a tiny amount of
energy; they are easy to detect at X-ray frequencies. As far as I
know (but I don't try to keep up with quantum physics' latest findings
so this may be wrong), we have not observed anything to suggest that
electromagnetic radiation comes in anything less than integral quanta.

Cheers,
Tom

4177. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 18:33:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vf40f7sgubna8a@corp.supernews.com>
Source record: 34830

The memory is blessedly dim now, but I seem to recall that one of the many, many scars on my butt is due to the unwelcome discovery that some iriditing processes result in a conductive surface and some in a non-conductive surface. It would be a good idea to check beforehand, unless you want another scar yourself.

Roy Lewallen, W7EL

Harold E. Johnson wrote:
>>I am planning to build a receiver using an aluminium chassis.
>>Would like to give a coating/treatment of the chassis
>>without affecting the electrical properties of the aluminium.
>>Any suggestions as to how to go about it are much appreciated.
>>TIA
>>
>>Iriite, also called yellow chromate. Passivates the surface without
>
> insulating it like anodizing does.
>
> W4ZCB
>
>
>

4178. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 18:45:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vf416smttms0a8@corp.supernews.com>
Source record: 34831

Tom Bruhns wrote:
> . . .
> Richard Feynman has some interesting comments about this. Try to
> think of it this way: when you think of a "particle" you are thinking
> probably of some solid thing like a billiard ball, and when you think
> of a "wave" you are probably thinking of waves in water or something
> similar. The problem with that is that electromagnetic radiation is
> just electromagnetic radiation, nothing more nor less, and IS NOT
> balls and IS NOT waves like in water. It is what it is, and behaves
> in its own way. We have ways of observing it which we can relate to
> "waves" and to "particles" but we must understand that those are
> crutches for us.
>
> He does a much better job explaining it...I think it's one of the
> lectures in the series marketed as "Six Easy Pieces".
> . . .

Yes, it's the sixth "easy piece", "Quantum Behavior":

"Things on a very small scale behave like nothing that you have any direct experience about. They do not behave like waves, they do not behave like particles, they do not behave like clouds, or billiard balls, or weights on springs, or like anything that you have ever seen. . . Historically, the electron, for example, was thought to behave like a particle, and then it was found that in many resepects it behaved like a wave. So it really behaves like neither. Now we have given up. We say: 'It is like *neither*'"

Highly recommended reading.

Roy Lewallen, W7EL

4179. Re: My xtal radio project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 20:52:07 UTC
From: johnfletch <johnfletch@fsmail.net>
Message-ID: <bct7u9$t7u$1@newsg4.svr.pol.co.uk>
Source record: 34832

nice site

4180. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 21:31:44 UTC
From: xyz <w-4-i-h-k-@mindspring.com>
Message-ID: <bcte5m$e9r$1@slb4.atl.mindspring.net>
Source record: 34835

Roy Lewallen wrote in message ...
>
>
>
>. . Historically, the electron, for example, was thought to behave like
>a particle, and then it was found that in many resepects it behaved like
>a wave. So it really behaves like neither. Now we have given up. We say:
>'It is like *neither*'"
>
>Highly recommended reading.
>
>Roy Lewallen, W7EL
>

Roy -- If it behaves like *neither*, does that make it 'virtual'?

I really am sorry about this...but the devil made me do it! ;)

Dean -- W4IHK

4181. Erasing high bias tape

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 22:29:15 UTC
From: hexter@blazenet.net
Message-ID: <vf4e9rq3dct178@corp.supernews.com>
Source record: 34833

Don't know if this will help any of you folks, but I recently tried to bulk erase a DAT 120 cassette, and had no noticable effect. I got the idea to place a large 'fender washer' under the tape, and the hand bulker on top of the tape. Presto! It erased like brand new. Tried this on some pesky CR02 tapes, and some metal tapes also. It works great.

4182. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 22:37:25 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <gge4fvgaqdmp9vvbltku8hgi9ug7uocc1g@4ax.com>
Source record: 34834

In <vf40f7sgubna8a@corp.supernews.com>, Roy Lewallen <w7el@eznec.com> wrote:

>The memory is blessedly dim now, but I seem to recall that one of the
>many, many scars on my butt is due to the unwelcome discovery that some
>iriditing processes result in a conductive surface and some in a
>non-conductive surface. It would be a good idea to check beforehand,
>unless you want another scar yourself.

Remembering basic chemistry that says bare Aluminum has an oxide layer on it
anyway, I would think that any form of surface treatment or coating is fine
provided any electrical connections are able to break the surface and contact
the aluminum underneath.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4183. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 23:20:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vf4h9n3e5ardf7@corp.supernews.com>
Source record: 34836

Yes, the oxide layer on aluminum is extremely thin (and brittle), and easily broken by just about any pressure at all. But iriditing and anodizing make a lot thicker layer, which can require a lot more effort to get through.

Roy Lewallen, W7EL

Frank Gilliland wrote:
> In <vf40f7sgubna8a@corp.supernews.com>, Roy Lewallen <w7el@eznec.com> wrote:
>
>
>>The memory is blessedly dim now, but I seem to recall that one of the
>>many, many scars on my butt is due to the unwelcome discovery that some
>>iriditing processes result in a conductive surface and some in a
>>non-conductive surface. It would be a good idea to check beforehand,
>>unless you want another scar yourself.
>
>
> Remembering basic chemistry that says bare Aluminum has an oxide layer on it
> anyway, I would think that any form of surface treatment or coating is fine
> provided any electrical connections are able to break the surface and contact
> the aluminum underneath.

4184. Re: frequency of light angstroms to mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-19 23:22:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vf4hd220mfs918@corp.supernews.com>
Source record: 34837

You'll have to check with Cecil on that. He's the undisputed virtual expert.

Roy Lewallen, W7EL

xyz wrote:
> Roy Lewallen wrote in message ...
>
>>
>>
>>. . Historically, the electron, for example, was thought to behave like
>>a particle, and then it was found that in many resepects it behaved like
>>a wave. So it really behaves like neither. Now we have given up. We say:
>>'It is like *neither*'"
>>
>>Highly recommended reading.
>>
>>Roy Lewallen, W7EL
>>
>
>
> Roy -- If it behaves like *neither*, does that make it 'virtual'?
>
> I really am sorry about this...but the devil made me do it! ;)
>
> Dean -- W4IHK
>
>
>
>

4185. Re: Test Do not read

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 00:14:38 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056068154.139309@auth2.dns.griffin.net.uk>
Source record: 34838

he will have to kill you!!!
"Dr. Anton Squeegee" <SpammersAreVermin@dev.null> wrote in message
news:MPG.1959815b35ce2c7898990b@192.168.42.131...
> In article <r28vevcvpg0iep7c55bu9pkjaoa8l2rvtl@4ax.com>, ritchi50
> @optonline.net says...
>
> Too late. I read it.
>
> What happens now?
>
>
> --
> Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
> (Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com)
> kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
> "Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
> Builder")

4186. check out our web page

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 00:15:26 UTC
From: gstamand <gstd223aman@rogers.com>
Message-ID: <ymsIa.146522$3Sm.108240@news01.bloor.is.net.cable.rogers.com>
Source record: 34839
Cross-posted to: alabama.birmingham.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.misc,relcom.radio.ham,se.hobby.amatorradio,sfnet.harrastus.radio.ham

http://greynet.net/~gbarc/

4187. Re: Motorola data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 00:16:17 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056068252.853430@auth2.dns.griffin.net.uk>
Source record: 34840

turns out to be high gain...thanks for all your input..
g0zen..simon
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:vehi41q6t4tm18@corp.supernews.com...
> Dr. Anton Squeegee wrote:
> > I didn't find anything on the 6166S. However, it has been my
> > experience in the past that parts with letters after their numbers like
> > that often indicate that the part is certified to be usable in specific
> > (and sometimes critical) applications, such as biomedical or space.
>
> I've seen a designation like this used to denote a part that's selected
> or more tightly specified, which is along the lines of what you've seen.
> A large equipment manufacturer might have a need for a transistor with
> all the specs of a 2N6166, but, say, a particularly high hfe for a
> particular application. They pay the transistor manufacturer to sort
> parts and furnish them with only ones having a sufficiently high hfe.
>
> Consequently, I think it would be safe to assume that the 2N6166S meets
> all the specs of a 2N6166. But there's probably no way to tell in what
> way it might be special, unless you have access to the internal
> specifications of the company that ordered it.
>
> Roy Lewallen, W7EL
>
>
>

4188. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 05:53:14 UTC
From: averyfineman@aol.com
Message-ID: <20030620015314.04554.00000594@mb-m20.aol.com>
Source record: 34841

In article <gge4fvgaqdmp9vvbltku8hgi9ug7uocc1g@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> writes:

>In <vf40f7sgubna8a@corp.supernews.com>, Roy Lewallen <w7el@eznec.com> wrote:
>
>>The memory is blessedly dim now, but I seem to recall that one of the
>>many, many scars on my butt is due to the unwelcome discovery that some
>>iriditing processes result in a conductive surface and some in a
>>non-conductive surface. It would be a good idea to check beforehand,
>>unless you want another scar yourself.
>
>Remembering basic chemistry that says bare Aluminum has an oxide layer on it
>anyway, I would think that any form of surface treatment or coating is fine
>provided any electrical connections are able to break the surface and contact
>the aluminum underneath.

Most aluminum alloys can be "surface treated" for either an
insulating layer (anodizing) or conductive layer (iridite and
others). To keep aluminum chassis perky and conductive, go
to a chemical film treatment company in one's area and ask
them to do a conductive chemical film treatment on the finished
chassis. They will know what to do and how to do it.

If no chemical film treatment company in the neighborhood, just
sand down the scratches and buff it with steel wool until it is as
shiny in appearance as desired and let it go at that. That will
hold for years without developing any insulating oxide layers.

For protection of appearance - and to cover any decals added to
the chassis - a coat of petroleum-based varnish will protect the
non-contact areas. For decals and lacquer-based paints and
markings, do a very quick brush-over with varnish first to prevent
bubbling from reaction between varnish and lacquer. [test fly that
on some scrap first to get the hang of the method]

Len Anderson
retired (from regular hours) electronic engineer person

4189. FS: Telefunken (Germany) ECL82 (diamond)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 07:19:34 UTC
From: servis_za_elektroniku@yahoo.com
Message-ID: <71725543.0306192319.428b69d1@posting.google.com>
Source record: 34842
Cross-posted to: rec.audio.tubes,rec.audio.marketplace,alt.guitar.amps,rec.radio.swap,rec.radio.amateur.homebrew

NOS 23 USD/piece.

More info on http://www.geocities.com/servis_za_elektroniku/My_page.html

4190. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 09:55:04 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <a4m5fvoej1eitrp4ctrdrbu5h557vm3onq@4ax.com>
Source record: 34843

In <20030620015314.04554.00000594@mb-m20.aol.com>, averyfineman@aol.com (Avery Fineman) wrote:

>In article <gge4fvgaqdmp9vvbltku8hgi9ug7uocc1g@4ax.com>, Frank Gilliland
><sparky@NOSPAMaimcomm.net> writes:
>
>>In <vf40f7sgubna8a@corp.supernews.com>, Roy Lewallen <w7el@eznec.com> wrote:
>>
>>>The memory is blessedly dim now, but I seem to recall that one of the
>>>many, many scars on my butt is due to the unwelcome discovery that some
>>>iriditing processes result in a conductive surface and some in a
>>>non-conductive surface. It would be a good idea to check beforehand,
>>>unless you want another scar yourself.
>>
>>Remembering basic chemistry that says bare Aluminum has an oxide layer on it
>>anyway, I would think that any form of surface treatment or coating is fine
>>provided any electrical connections are able to break the surface and contact
>>the aluminum underneath.
>
> Most aluminum alloys can be "surface treated" for either an
> insulating layer (anodizing) or conductive layer (iridite and
> others).

Can either of them withstand the teeth of a standard lock-washer? I know that even epoxy paint will crack and permit the teeth to grab the metal. Does the anodizing process linger long enough to affect bare aluminum surfaces that are exposed at a later time?

==========

"...but I admitted I was wrong, Like a man! Something you and QRM
have a problem with. You guys are wrong and you both know it and
are both too small to admit it."
---- Twistedhed ----

==========

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4191. Re: Telefunken (Germany) ECL82 (diamond)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 10:22:39 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <1hBla.1098$xF.80877@newsfep2-win.server.ntli.net>
Source record: 34844
Cross-posted to: rec.audio.tubes,rec.audio.marketplace,alt.guitar.amps,rec.radio.swap,rec.radio.amateur.homebrew

> NOS 23 USD/piece.
>
> More info on http://www.geocities.com/servis_za_elektroniku/My_page.html
==========
Sorry , these prices are unrealistic . In UK from a reputable company GBP
5.00 = approx US $ 7.50

Frank GM0CSZ / KN6WH

4192. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 11:40:42 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <bcurrqfiu1@hercules.btinternet.com>
Source record: 34845

Spray-paint only the visible side.

4193. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 19:42:38 UTC
From: averyfineman@aol.com
Message-ID: <20030620154238.25815.00000825@mb-m07.aol.com>
Source record: 34846

In article <a4m5fvoej1eitrp4ctrdrbu5h557vm3onq@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> writes:

>> Most aluminum alloys can be "surface treated" for either an
>> insulating layer (anodizing) or conductive layer (iridite and
>> others).
>
>Can either of them withstand the teeth of a standard lock-washer? I know that
>even epoxy paint will crack and permit the teeth to grab the metal. Does the
>anodizing process linger long enough to affect bare aluminum surfaces that are
>exposed at a later time?

Chemical film treatments of aluminum, whether coductive or non-
conductive, are uniform and last for years.

Aluminum is curious since its surface oxidation (as in anodizing)
inhibits any further oxidation activity of the base metal. Ferrous
metals (except for stainless and such alloys) rust all the way
through. Brass, copper, tin can all oxidize all the way given time.
Aluminum surface oxidation is almost self-protecting.

Yes, enough force applied in a small area (lockwashers, etc.) will
cut through even the thickest oxidation films. Also most paints.

The chemical film treatments of aluminum are more cosmetic than
protective although they are protective for periods of a half century
to a century when exposed to exterior environments. If the
frequency is high enough for skin effect to be large, the surface
treatment may have to be something other than a chemical film.
That is usually at microwaves above 30 GHz or so.

If you really want pretty looking chassis of aluminum, go to a
good, versatile plating company and get "electroless" copper
plating on the aluminum, possibly nickel over that, with a heavy
chrome plating as final. It won't work any better but it will look
like a million bucks! :-)

Len Anderson
retired (from regular hours) electronic engineer person

4194. Re: polarized to non-polarized capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 21:27:31 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <7%KIa.3359$pH3.1362@news2.east.cox.net>
Source record: 34697

"Troglodite" <troglodite@aol.com> wrote in message
news:20030611094439.28409.00000299@mb-m13.aol.com...
> >Some time ago I recall seeing an article using a polarized electrolyic
> >capacitor as a non-polarized by connecting it to a full wave bridge
> >rectifier. Anyone recall where I might have seen this and has anyone had
> >any success with this trick?
>
> While this sounds sort of right, it does not work. The capacitor simply
charges
> up until on all following cycles the diodes are reverse biased. Think
about it.
>
> The two electrolytics in series with reverse charge shunting diodes works,
but
> the life expectancy of the electrolytics is considerably shortened.
>
> Your best bet is a true non-polar, like a motor starting capacitor.
>
> Doug Moore
>
I saw this suggested, but also to use double capacitance ratings since
the caps are essentially in series. I am not convinced that the "reverse"
biased cap would fully discharge in an half-cycle time period. What
is correct here?

Pete

4195. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 22:26:32 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <t227fvkgno6e6a8bvi05jdancr8eunlctk@4ax.com>
Source record: 34698

In <20030620154238.25815.00000825@mb-m07.aol.com>, averyfineman@aol.com (Avery Fineman) wrote:

>In article <a4m5fvoej1eitrp4ctrdrbu5h557vm3onq@4ax.com>, Frank Gilliland
><sparky@NOSPAMaimcomm.net> writes:
>
>>> Most aluminum alloys can be "surface treated" for either an
>>> insulating layer (anodizing) or conductive layer (iridite and
>>> others).
>>
>>Can either of them withstand the teeth of a standard lock-washer? I know that
>>even epoxy paint will crack and permit the teeth to grab the metal. Does the
>>anodizing process linger long enough to affect bare aluminum surfaces that are
>>exposed at a later time?
>
> Chemical film treatments of aluminum, whether coductive or non-
> conductive, are uniform and last for years.
>
> Aluminum is curious since its surface oxidation (as in anodizing)
> inhibits any further oxidation activity of the base metal. Ferrous
> metals (except for stainless and such alloys) rust all the way
> through. Brass, copper, tin can all oxidize all the way given time.
> Aluminum surface oxidation is almost self-protecting.
>
> Yes, enough force applied in a small area (lockwashers, etc.) will
> cut through even the thickest oxidation films. Also most paints.
>
> The chemical film treatments of aluminum are more cosmetic than
> protective although they are protective for periods of a half century
> to a century when exposed to exterior environments. If the
> frequency is high enough for skin effect to be large, the surface
> treatment may have to be something other than a chemical film.
> That is usually at microwaves above 30 GHz or so.
>
> If you really want pretty looking chassis of aluminum, go to a
> good, versatile plating company and get "electroless" copper
> plating on the aluminum, possibly nickel over that, with a heavy
> chrome plating as final. It won't work any better but it will look
> like a million bucks! :-)
>
> Len Anderson
> retired (from regular hours) electronic engineer person

I know that the oxidation of aluminum stops at the surface, but I was wondering if the anodizing treatment (or any other treatment) migrates or 'bleeds' over

time, kinda like oxidation on other types of metals. And is there any effect (corrosion) when aluminum is making an electrical contact with other metals like copper, tin or lead?

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4196. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-20 23:24:19 UTC
From: scharkalvin <wa2mze@bellsouth.net>
Message-ID: <3EF397A3.30600@bellsouth.net>
Source record: 34699

John Miles wrote:
> In article <3ee5d0da$0$6715@echo-01.iinet.net.au>, richardh@iinet.net.au
> says...
>
>>John
>>Is it something to do with the PLL filter?. There is an RC network to VCC
>>from memory as the loop filter
>
>
> Sure seems like it. However, I replaced the loop filter components a
> couple of times, just to be sure. No effect.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Many years ago I had a stability problem with an old 74ls123 monostable.
Changing the chip didn't help, nor did sub'ing caps. Finally I glued a
small
heatsink onto the chip with superglue. It settled down and worked fine.
Try heat sinking that sucker!

BTW I just got a sample of AD's new 9954. If I get my eyes to focus
that close
to the thing and find some real small solding tips for my weller, I might
try and see what this puppy will do.

4197. just heard something good

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 00:31:04 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EF3A748.1080303@hotmail.com>
Source record: 34700

Amidon's line of toroid cores is available in Canada from Durham Radio!
Their web site will offer them for sale sometime next week. Now I order
a bunch for my projects....

4198. Latest project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 02:40:06 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3EF3C585.3144B5DB@visi.com>
Source record: 34701

Hi gang,
I just finished the "Improved Huff & Puff Stabilizer" from this site:

http://www.hanssummers.com/radio/huffpuff/rcdec97.htm

After a bit of playing with some values in the oscillator, I think it
is working correctly. It passes the 'hot breath' test nicely, no
noticeable drift after blowing a lung full of hot air over it.

More anon

Bob WB0POQ

4199. Re: Latest project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 14:16:55 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <rNZIa.51808$vq.11092@sccrnsc04>
Source record: 34702

> After a bit of playing with some values in the oscillator, I think it
> is working correctly. It passes the 'hot breath' test nicely, no
> noticeable drift after blowing a lung full of hot air over it.
>
> More anon
>
> Bob WB0POQ

To verify that, you should read the varactor voltage and see if it moves up (or down) as you breathe on it to correct the drift. I still think you'd like Pete Lawtons version better, but if the VFO frequency is not high, you probably won't notice the difference. Don't try moving your finger close to the VFO to test it, it depends on the drift being reasonably slow. (Which lung?)

W4ZCB

4200. Re: ALERT- - Rid your PC of Illegal Images rrrrrrrr 630 [926/3]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 16:05:12 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EF48238.8070409@hotmail.com>
Source record: 34703

Can this software delete you? or delete my e-mail address from spammers
lists?

srxins@yhd65.com wrote:
> You're in Serious Trouble - It's a Proven Fact!
>
> FBI FORENSICS CAN FIND DELETED FILES
>
> THERE ARE THINGS ON YOUR COMPUTER
> THAT YOU THOUGHT YOU DELETED.
>
> !!!!BUT THEY ARE STILL THERE!!!
>
> Click here for details on the EVIDENCE ELIMINATOR
>
> Clear your computer of incriminating files
> that you cannot delete.
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> www.removefiles.com
>
> THIS IS A MUST READ!!!!
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> POST
> From: srxins@yhd65.com
> Newsgroups: de.comp.os.unix.linux.hardware,rec.radio.amateur.homebrew,alt.wholesale
> Subject: ALERT- - Rid your PC of Illegal Images rrrrrrrr 630 [927/3]
>
>
> You're in Serious Trouble - It's a Proven Fact!
>
> FBI FORENSICS CAN FIND DELETED FILES
>
> THERE ARE THINGS ON YOUR COMPUTER
> THAT YOU THOUGHT YOU DELETED.
>
> !!!!BUT THEY ARE STILL THERE!!!
>
> Click here for details on the EVIDENCE ELIMINATOR
>
> Clear your computer of incriminating files
> that you cannot delete.

4201. Be SURE to oppose Broadband Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 17:11:12 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0306210911.5ab4f06c@posting.google.com>
Source record: 34704
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

BE SURE TO FILE YOUR COMMENTS WITH THE FCC. You can do this easily and conveniently at:

http://gullfoss2.fcc.gov/ecfs/Upload/

Just select "Broadband Over Power Line (BPL) - Docket 03-104" and press Continue.

If you don't know what all this is about, go to:
http://www.arrl.org/news/stories/2003/05/08/3/#noi

Jason Hsu, AG4DG

4202. Re: Chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 17:38:46 UTC
From: averyfineman@aol.com
Message-ID: <20030621133846.10078.00000370@mb-m26.aol.com>
Source record: 34706

In article <t227fvkgno6e6a8bvi05jdancr8eunlctk@4ax.com>, Frank Gilliland
<sparky@NOSPAMaimcomm.net> writes:

>I know that the oxidation of aluminum stops at the surface, but I was
wondering
>if the anodizing treatment (or any other treatment) migrates or 'bleeds' over
>time, kinda like oxidation on other types of metals. And is there any effect
>(corrosion) when aluminum is making an electrical contact with other metals
like
>copper, tin or lead?

I don't recall seeing any such "bleed" effect, even in old WW2 surplus
equipment...but I don't pretend to be a metallurgist, either. :-)

If in doubt, use stainless steel fasteners wherever possible with
aluminum main support structures. They last a long time without
much apparent degredation.

You may be thinking of some of the old, cheap TV antennas that
have been up for years and exposed to the elements...and suffering
all kinds of corrosion and embrittlement. Most of that comes from
the apparent use of very ductile aluminum (easy to manufacture)
and little or no surface treatment other than a light oxidation with
dye bath to give it that "gold" color.

My wife and I had our residence windows replaced last year with
vinyl-steel structures. The originals were "modular" aluminum frames
that had been there for 40 years (house built in 1962). Neither the
exterior nor interior surfaces of those modular aluminum window
frames had anything resembling "bleed" (corrosion spreading) other
than some cosmetic effects. Periodic steel wool rubbing would take
care of most such cosmetic surface oxidation. I've used one 8-foot
wide aluminum frame as an FM and SW BC "antenna" (insulated by
typical wood house structure) just by a solder lug and self-tapping
screw into the frame. That worked fine for about 30 years. :-)

In most military electronics structures involving aluminum, the
typical aluminum alloy for machined supports is "2024" type and
sheet-metal structures is typically "6061" type. Those seem to last
almost indefinitely as-is without much change in appearance. MIL
Specs on hardware call for stainless steel with that...or at least the
mechanical engineers I've worked with always called that out.

I'm sure there are all sorts of electrolysis effects that happen with
severe weathering such as in seacoast areas, salt from roads
treated for icing and so forth. Based on what I've seen and

handled over the last half-century plus, aluminum chassis with SS hardware hangs in there relatively as-is and no real degredation from oxidation or much else. If in doubt about something looking "terrible," whip out the VOM and measure joints...most of that terrible appearance is more than likely just cosmetic. :-)

Len Anderson
retired (from regular hours) electronic engineer person

4203. searching for CATV tuner hookup data

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 17:46:23 UTC
From: The Eternal Squire <eternalsquire@comcast.net>
Message-ID: <ue2cnStycO5GCGmjXTWJjQ@comcast.com>
Source record: 34705

Hi, I am searching for CATV tuner hookup data for the following tuners: EL683, TNV-76775F2,TEMH3-050A. These are pulls I took from VCR's. I am wanting to build a tuner-based spectrum analyzer, but I have been completely unable to find any tuner data on the net. Rumor has it that such has been self-censored as to not run afoul of scanner laws across the US, but these laws have ham exemptions so I don't see what the point of the censorship is. Failing any data for specific tuners, can anyone guide me to sites where I can find data for tuners that I can buy. Thanks in advance. 73, WA2JAZ.

4204. Re: just heard something good

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-21 19:09:20 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0306211109.3b6fd0d1@posting.google.com>
Source record: 34707

Alex <ve3leg@hotmail.com> wrote in message news:<3EF3A748.1080303@hotmail.com>...

> Amidon's line of toroid cores is available in Canada from Durham Radio!

> Their web site will offer them for sale sometime next week. Now I order

> a bunch for my projects....

RP Electronics in Vancouver (OK, Burnaby...) have
been selling them for years. Check their web page.
http://www.rpelectronics.com

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

4205. Re: searching for CATV tuner hookup data

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 00:05:51 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056240427.961975@auth2.dns.griffin.net.uk>
Source record: 34708

http://zanco.dyndns.org//Datasheet/tv_satellite_tuners_and_frontends/

try there.. link found on homebrew spectrum analyser
site.......http://www.nitehawk.com/rasmit/sa50.html

let me know how the project goes...been thinking about making one
myself...but i want to make a pic based lcd scope to put it in so i can make
it portable..have found 1 site with a crude lcd scope but am still
looking...if you know of one???

anyway hope that helps..

simon g0zen

"The Eternal Squire" <eternalsquire@comcast.net> wrote in message
news:ue2cnStycO5GCGmjXTWJjQ@comcast.com...
> Hi, I am searching for CATV tuner hookup data for the following tuners:
> EL683, TNV-76775F2,TEMH3-050A. These are pulls I took from VCR's. I am
> wanting to build a tuner-based spectrum analyzer, but I have been
completely
> unable to find any tuner data on the net. Rumor has it that such has been
> self-censored as to not run afoul of scanner laws across the US, but these
> laws have ham exemptions so I don't see what the point of the censorship
is.
> Failing any data for specific tuners, can anyone guide me to sites where I
> can find data for tuners that I can buy. Thanks in advance. 73, WA2JAZ.
>
>

4206. Re: Latest project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 01:15:40 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3EF5033C.C78E3BB@visi.com>
Source record: 34709

"Harold E. Johnson" wrote:
>
> > After a bit of playing with some values in the oscillator, I think it
> > is working correctly. It passes the 'hot breath' test nicely, no
> > noticeable drift after blowing a lung full of hot air over it.

>
> To verify that, you should read the varactor voltage and see if it moves up
> (or down) as you breathe on it to correct the drift.

Yup, it does. :)

> (Which lung?)

Right lung causes increase in freq, left lung decrease. ;)

Bob

4207. Re: Latest project

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 01:55:58 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <O08Ja.54355$hz1.129537@sccrnsc01>
Source record: 34710

>
> Right lung causes increase in freq, left lung decrease. ;)

There's an answer I hadn't thought of! Right lung contains air that's above ambient and the left one is refrigerated?

Huff n Puffs are remarkable. Old Klaas was really thinking when he came up with that originally. Hardly affects the phase noise, and stays put close to forever if you can stand the drift to the nearest lock point.

Regards, and congrats on the project.

W4ZCB

4208. Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 11:59:30 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <g66bfvo2kc5568do5hlmoc5ttsa2mgvk0u@4ax.com>
Source record: 34711

I have a couple of identical inverters (generate 120 VAC from a 12V DC source. Each is rated at 400 watts. Seems to me I should be able to parallel their outputs to get 800 watts if I can lock them in phase.

Seems like I should be able to lock the phases if I go inside and rewire so that one's master 60 cycle clock/oscillator/whatever is controlling both of them.

Anybody done anything like this? Your thoughts?

Jerry W4UK

--
To reply, remove space in je flanders@comcast.net

4209. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 12:30:04 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vfb8b0tnn1r760@corp.supernews.com>
Source record: 34712

It's probably going to be more complex than simply locking the inverters in phase. If one puts out a little more voltage than the other then current will flow from the higher voltage unit into the lower voltage unit. It will become part of the load rather than part of the source. Whether that will do any damage or whether they will adjust to balance the load between them probably depends on the design of the inverter.

4210. Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 15:27:54 UTC
From: kgb190@aol.com
Message-ID: <20030622112754.06805.00001341@mb-m19.aol.com>
Source record: 34714

Before beginning a project of my own, Ive been following alot of good advice from the web,and have been pracice soldering on old circuit boards, at the same time becoming familiar with the types and values of components. Several question were raised that I dont remember reading about, anyone out there know? O.K. Im looking at 5 capacitors, 4 of them are ceramic disk, the fourth is a green disk... what type are the green disks? All five have the numbers 27 on them, #1 just says 27, #2 says27 but is underlined,, #3 says 27 underlined w/ blue cap, #4 same but w/ yellow cap, and green capacitor has a purple cap. At first I assumed the underline was to ease reading the value, now I am not sure, is it significant?... I also remember reading about colored dot nomenclature, and colored stripes on some caps, but not about the "dipped" top. Tolerance code?
Thanks in advance for the education, hope I can repay you someday...

4211. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 16:09:45 UTC
From: Chuck / KE4ETH <chuck_hawks@hotmail.com>
Message-ID: <%NiJa.6777$mS2.1760@fe04.atl2.webusenet.com>
Source record: 34713

Jerry,

You might try the alt.energy.homebrew newsgroup. Someone there may have already tried and can tell you what would need to be done.

HTH,
73
Chuck
KE4ETH

"Jerry Flanders" <SeeSignature@below.com> wrote in message news:g66bfvo2kc5568do5hlmoc5ttsa2mgvk0u@4ax.com...
> I have a couple of identical inverters (generate 120 VAC from a 12V DC
> source. Each is rated at 400 watts. Seems to me I should be able to
> parallel their outputs to get 800 watts if I can lock them in phase.
>
> Seems like I should be able to lock the phases if I go inside and
> rewire so that one's master 60 cycle clock/oscillator/whatever is
> controlling both of them.
>
> Anybody done anything like this? Your thoughts?
>
> Jerry W4UK
>
> --
> To reply, remove space in je flanders@comcast.net

4212. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 16:18:21 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <1cv85j60to59h$.140st37r3enqv.dlg@40tude.net>
Source record: 34715

On Sun, 22 Jun 2003 11:59:30 +0000, Jerry Flanders wrote:

> I have a couple of identical inverters (generate 120 VAC from a 12V DC
> source. Each is rated at 400 watts. Seems to me I should be able to
> parallel their outputs to get 800 watts if I can lock them in phase.
>
> Seems like I should be able to lock the phases if I go inside and
> rewire so that one's master 60 cycle clock/oscillator/whatever is
> controlling both of them.
>
> Anybody done anything like this? Your thoughts?
>
> Jerry W4UK

It's not uncommon for any kind of power supplies to be put in parallel, but you almost always have to isolate them from each other with a small value resistor. It isn't just a matter of frequency and phase, but also the output voltage and the slightly different regulation as well.

A couple of small resistors can cure a multitude of ills.

--
73, Bill W7TI

4213. Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 17:55:56 UTC
From: funkbastler <funkbastler@yahoo.com>
Message-ID: <4sqbfv8riho32pa8v52ae0nomdb20mtufr@4ax.com>
Source record: 34716

Veltex is the "loop" half of Velcro in sheet form. Glue a piece inside your briefcase/hardcase, then wrap a piece of double-sided Velcro (hook side out) around your QRP rig, tuner, power supply, etc., and stick 'em in the case. They don't move till you move 'em.

All I've found on the web is folks selling rolls five feet wide and 30 feet long for $120 and up. I need is a piece about 18" by 24".

Anybody know of anyone selling "cut to size" pieces, or at least pieces under 150 square feet?

Thanks,
-fb-

4214. Re: Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 18:05:08 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <bd4r4k$86o$1@mail.specsol.com>
Source record: 34717

funkbastler <funkbastler@yahoo.com> wrote:
> Veltex is the "loop" half of Velcro in sheet form. Glue a piece
> inside your briefcase/hardcase, then wrap a piece of double-
> sided Velcro (hook side out) around your QRP rig, tuner, power
> supply, etc., and stick 'em in the case. They don't move till
> you move 'em.

> All I've found on the web is folks selling rolls five feet wide and
> 30 feet long for $120 and up. I need is a piece about 18" by 24".

> Anybody know of anyone selling "cut to size" pieces, or at least
> pieces under 150 square feet?

> Thanks,
> -fb-

Try a fabric store or a crafts store.

--
Jim Pennino

4215. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 18:08:50 UTC
From: funkbastler <funkbastler@yahoo.com>
Message-ID: <6trbfv48n0vl2f8hurldl2goah26auv2o3@4ax.com>
Source record: 34718

On Sun, 22 Jun 2003 09:09:45 -0700, "Chuck / KE4ETH"
<chuck_hawks@hotmail.com> wrote:

>Jerry,
>
>You might try the alt.energy.homebrew newsgroup. Someone there may have
>already tried and can tell you what would need to be done.
>

alt.energy.homepower (maybe)??

homebrew doesn't show up on goole or giganews - does it really exist?

-fb-

4216. Re: Telefunken (Germany) ECL82 (diamond)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 18:23:12 UTC
From: la8ak.xnd@online.no
Message-ID: <3ef55b74.217586124@news.online.no>
Source record: 34719
Cross-posted to: rec.audio.tubes,rec.audio.marketplace,alt.guitar.amps,rec.radio.swap,rec.radio.amateur.homebrew

On Fri, 20 Jun 2003 11:22:39 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> NOS 23 USD/piece.
>>
>> More info on http://www.geocities.com/servis_za_elektroniku/My_page.html
>=====================
>Sorry , these prices are unrealistic . In UK from a reputable company GBP
>5.00 = approx US $ 7.50
>
>Frank GM0CSZ / KN6WH
>
>
>
In UK the 6BM8/ECL82 were usually found in cheap rental tellies, so
they can't be too high priced, hi

73 JM

4217. Re: Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 18:26:58 UTC
From: funkbastler <funkbastler@yahoo.com>
Message-ID: <94tbfv43dajkpmb9h826ev8p6fv6v960pe@4ax.com>
Source record: 34720

On Sun, 22 Jun 2003 18:05:08 +0000 (UTC), Jim Pennino
<jimp@specsol.com> wrote:

>
>Try a fabric store or a crafts store.

No luck at Hobby Lobby, Hancock Fabrics and Wal-Mart.
That's all I have locally.

-fb-

4218. Re: Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 18:40:48 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <bd4t7g$d75$1@mail.specsol.com>
Source record: 34721

funkbastler <funkbastler@yahoo.com> wrote:
> On Sun, 22 Jun 2003 18:05:08 +0000 (UTC), Jim Pennino
> <jimp@specsol.com> wrote:

>>
>>Try a fabric store or a crafts store.

> No luck at Hobby Lobby, Hancock Fabrics and Wal-Mart.
> That's all I have locally.

> -fb-

Hmmm, stores here must be better stocked.

Have you tried asking if either can order it for you?

--
Jim Pennino

4219. Re: Telefunken (Germany) ECL82 (diamond)

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 19:18:27 UTC
From: funkbastler <funkbastler@yahoo.com>
Message-ID: <p30cfvcucvk2n1pq938kta6bklf6pdleqn@4ax.com>
Source record: 34722
Cross-posted to: rec.audio.tubes,rec.audio.marketplace,alt.guitar.amps,rec.radio.swap,rec.radio.amateur.homebrew

On Sun, 22 Jun 2003 18:23:12 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>On Fri, 20 Jun 2003 11:22:39 +0100, "Frank Dinger"
><gm0csz.kn6wh@ntlworld.com> wrote:
>
>>> NOS 23 USD/piece.
>>>
>>> More info on http://www.geocities.com/servis_za_elektroniku/My_page.html
>>>====================
>>Sorry , these prices are unrealistic . In UK from a reputable company GBP
>>5.00 = approx US $ 7.50
>>
>>Frank GM0CSZ / KN6WH
>>
>>
>>
>In UK the 6BM8/ECL82 were usually found in cheap rental tellies, so
>they can't be too high priced, hi
>
>73 JM

$9.75 from http://www.tubesandmore.com in the US.

-fb-

4220. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 20:00:52 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vfc2o7sa646hdb@corp.supernews.com>
Source record: 34723

> A couple of small resistors can cure a multitude of ills.
>
Just remember that the resistors will cause the output voltage to
become less regulated than the original supply. It all depends on how
tightly regulated you need the output voltage to be.

4221. Re: just heard something good

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 22:43:44 UTC
From: Alex <ve3leg@hotmail.com>
Message-ID: <3EF63120.5020401@hotmail.com>
Source record: 34725

Really? I had no idea. Thanks. Durham's will be a dollar cheaper for a
pack of 4 T50-2's though.

Laura Halliday wrote:
> Alex <ve3leg@hotmail.com> wrote in message news:<3EF3A748.1080303@hotmail.com>...
>
>
>>Amidon's line of toroid cores is available in Canada from Durham Radio!
>
>
>>Their web site will offer them for sale sometime next week. Now I order
>
>
>>a bunch for my projects....
>
>
>
>
> RP Electronics in Vancouver (OK, Burnaby...) have
> been selling them for years. Check their web page.
> http://www.rpelectronics.com
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4222. Re: Need Siemens Level Oscillator Schem.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 22:48:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3ef5f4d6.256857892@news.online.no>
Source record: 34724

On Mon, 09 Jun 2003 22:23:37 GMT, "H. Simpson"
<h.a.simpson@worldnet.att.net> wrote:

>I'm trying to get a Siemens Level Oscillator W2006 (0 to 17 MHz) up and
>running. This is beautifully built mechanically, but unfortunately mine's
>not working electrically and is a bit more complex than the average sig.
>generator. A schematic and any additional information sure would help. Does
>anyone have the schematic or manual info on this? I've searched the web to
>no avail. This unit was made in the late 60's
>
>Thanks in advance.
>
>Al, WA1VHD
>
>
Well, I have to ask a friend 80miles from here if he has the W2006
Pegelsender book, but I can't undertake the copying. So the solution
is to go to a copying shop and ask what they charge for the job. We
only used D2006 Pegelmesser at my work.The D2006 is many pages and I
have only read the German language text, but it may be some
explanations in English

Suppose the unit was made in the 70's

73
Jan-Martin

see information about instruments at
http://home.online.no/~la8ak/m.htm

4223. Re: Be SURE to oppose Broadband Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 23:08:33 UTC
From: user@domain.invalid
Message-ID: <3EF636F1.8020006@domain.invalid>
Source record: 34726
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Why bother? Unless you are a billionaire lining Powell's pockets, he is
not going to listen.

4224. Re: Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 23:19:03 UTC
From: averyfineman@aol.com
Message-ID: <20030622191903.03929.00000445@mb-m28.aol.com>
Source record: 34727

In article <94tbfv43dajkpmb9h826ev8p6fv6v960pe@4ax.com>, funkbastler
<funkbastler@yahoo.com> writes:

>On Sun, 22 Jun 2003 18:05:08 +0000 (UTC), Jim Pennino
><jimp@specsol.com> wrote:
>
>>Try a fabric store or a crafts store.
>
>No luck at Hobby Lobby, Hancock Fabrics and Wal-Mart.
>That's all I have locally.

A suggestion: Try asking for the generic name of Velcro.

Michael's craft stores have it in many different sizes.

A form of it in strips is available in gardening supplies as
a tape (loops on one side, hooks on the other) available at
Lowe's and OSH (Orchard Supply Hardware). Green in
color, it may not support anything large but can be used to
tie coax to a mast (as an example).

Len Anderson
retired (from regular hours) electronic engineer person

4225. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-22 23:37:29 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3ef63df2$0$11184@echo-01.iinet.net.au>
Source record: 34728

I just looked on the AD website - these are still not being sampled to the
plebs like me
Where'd ya getit?

Richard

scharkalvin <wa2mze@bellsouth.net> wrote in message
news:3EF397A3.30600@bellsouth.net...
> John Miles wrote:
> > In article <3ee5d0da$0$6715@echo-01.iinet.net.au>, richardh@iinet.net.au
> > says...
> >
> >>John
> >>Is it something to do with the PLL filter?. There is an RC network to
VCC
> >>from memory as the loop filter
> >
> >
> > Sure seems like it. However, I replaced the loop filter components a
> > couple of times, just to be sure. No effect.
> >
> > -- jm
> >
> > ----------
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > ----------
>
> Many years ago I had a stability problem with an old 74ls123 monostable.
> Changing the chip didn't help, nor did sub'ing caps. Finally I glued a
> small
> heatsink onto the chip with superglue. It settled down and worked fine.
> Try heat sinking that sucker!
>
> BTW I just got a sample of AD's new 9954. If I get my eyes to focus
> that close
> to the thing and find some real small solding tips for my weller, I might
> try and see what this puppy will do.
>
>

4226. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 00:43:17 UTC
From: Frank Gilliland <sparky@NOSPAMaimcomm.net>
Message-ID: <26jcfv4eiv1gcuepb4sq6hcqqljemnnild@4ax.com>
Source record: 34729

In <1cv85j60to59h$.140st37r3enqv.dlg@40tude.net>, Bill Turner <noway@nohow.com>
wrote:

>On Sun, 22 Jun 2003 11:59:30 +0000, Jerry Flanders wrote:
>
>> I have a couple of identical inverters (generate 120 VAC from a 12V DC
>> source. Each is rated at 400 watts. Seems to me I should be able to
>> parallel their outputs to get 800 watts if I can lock them in phase.
>>
>> Seems like I should be able to lock the phases if I go inside and
>> rewire so that one's master 60 cycle clock/oscillator/whatever is
>> controlling both of them.
>>
>> Anybody done anything like this? Your thoughts?
>>
>> Jerry W4UK
>____
>
>It's not uncommon for any kind of power supplies to be put in parallel, but
>you almost always have to isolate them from each other with a small value
>resistor. It isn't just a matter of frequency and phase, but also the
>output voltage and the slightly different regulation as well.

If the transistors/MOSFETs already have current-equalizing resistors, it
shouldn't require any more. Instead of feeding a clock signal from master to
slave, just disable the regulator on the slave and drive it with the output from
the master's regulator.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4227. Re: Where to buy pieces of Veltex?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 01:34:09 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <l0kcfv80b31sl1r52014ae5476tspugirv@4ax.com>
Source record: 34730

On Sun, 22 Jun 2003 12:55:56 -0500, funkbastler
<funkbastler@yahoo.com> wrote:

>Veltex is the "loop" half of Velcro in sheet form. Glue a piece
>inside your briefcase/hardcase, then wrap a piece of double-
>sided Velcro (hook side out) around your QRP rig, tuner, power
>supply, etc., and stick 'em in the case. They don't move till
>you move 'em.
>
>All I've found on the web is folks selling rolls five feet wide and
>30 feet long for $120 and up. I need is a piece about 18" by 24".
>
>Anybody know of anyone selling "cut to size" pieces, or at least
>pieces under 150 square feet?
>
Suppliers of outdoor fabrics may be helpful, although they mainly deal
with the tape form, up to 3" wide.

See this site for mail order suppliers of outdoor fabrics:
http://www.specialtyoutdoors.com/tips.htm

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4228. VHF/UHF antenna switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 02:39:31 UTC
From: Luis Rolo <luisrolo@netcabo.pt>
Message-ID: <3ef667d3$0$642$a729d347@news.telepac.pt>
Source record: 34735

I am thinking about building a remote antenna switch mostly for 2m, 70 cm
and a discone (25Mhz-1.3Ghz) antennas. I suppose that common relays do not
work at these frequencies, where can I find cheap RF relays for my project?
Any clue? Max power level is 100W.
thanks in advance,

Luis Rolo
CT2INY
OPO, PT

4229. Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 03:19:56 UTC
From: Dick <boleyd@yahoo.com>
Message-ID: <wluJa.4781$Hw.3990199@news2.news.adelphia.net>
Source record: 34731

Does anyone have any first-hand experience with sophisticated direct conversion receivers. The ones that actually suppress the opposite sideband.

Dick N3HKN

4230. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 03:45:33 UTC
From: Peter Brackett <ab4bc@ix.netcom.com>
Message-ID: <bd5t50$ps4$1@slb6.atl.mindspring.net>
Source record: 34732

Dick:

[snip]
"Dick" <boleyd@yahoo.com> wrote in message
news:wluJa.4781$Hw.3990199@news2.news.adelphia.net...
> Does anyone have any first-hand experience with sophisticated direct
> conversion receivers. The ones that actually suppress the opposite
sideband.
>
> Dick N3HKN
[snip]

See the new ARRL publication, "Experimental Methods in RF Design", by Hayward, Campbell and Larkin, it's full of information, circuits, etc... on how to build top notch direct conversion receivers with modern Op Amp based phase shift networks complete with error analysis and sideband supression data, etc.

--
Peter K1PO
Indialantic By-the-Sea, FL.

4231. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 07:18:53 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <27adfvcphl9vclisqnr7hh8ff1tlekdrc5@4ax.com>
Source record: 34733

It ort to be very easy these days.

All you need is IQ out (just simple low pass filtered), and stuff that into the stereo line in on a modern PC (96dB dynamic range), a bit of software, and you have yourself a top notch any mode RX.

Could always buy a 24-bit stereo card if you wanted more dynamic range.

Clive

4232. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 09:23:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vfdho9onb2fe0d@corp.supernews.com>
Source record: 34734

There are, however, a number of tricks to designing a good DC receiver in the first place. If it's poorly done, all the processing in the world won't make it good.

It's not necessarily harder -- or easier -- to make a good DC receiver than to make a good superhet. But the problems and solutions are different. I suggest reading any of Rick Campbell's work on the topic -- he knows how to make a good DC receiver.

Roy Lewallen, W7EL

c.a.m@antijunk3.blueyonder.co.uk wrote:
> It ort to be very easy these days.
>
> All you need is IQ out (just simple low pass filtered), and stuff that into the
> stereo line in on a modern PC (96dB dynamic range), a bit of software, and you
> have yourself a top notch any mode RX.
>
> Could always buy a 24-bit stereo card if you wanted more dynamic range.
>
> Clive
>

4233. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 09:35:55 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <qVzJa.9675$xF.570468@newsfep2-win.server.ntli.net>
Source record: 34736

> I just looked on the AD website - these are still not being sampled to the
> plebs like me
> Where'd ya getit?
==========
AD only send samples to an address in the USA . By having it sent to a US
address I received a sample of 4 RF Log Amps.

Frank GM0CSZ / KN6WH

4234. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 09:47:08 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <0sidfv0kanrd610ke6beodalgrn75vkglk@4ax.com>
Source record: 34737

>There are, however, a number of tricks to designing a good DC receiver
>in the first place. If it's poorly done, all the processing in the world
>won't make it good.
>
>It's not necessarily harder -- or easier -- to make a good DC receiver
>than to make a good superhet. But the problems and solutions are
>different. I suggest reading any of Rick Campbell's work on the topic --
>he knows how to make a good DC receiver.

Yep, I agree.

<http://www.wwc.edu/%7Efrohro/R2_DSP/R2-DSP.html>

The DSP board could however be easily replaced by a good PC with a nice sound card - just for simplicity.

Clive

4235. BLY88c transistor replacement ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 10:04:08 UTC
From: G&#65533;ry Duyck <gery@duyck-co.be>
Message-ID: <3ef6d00b$0$294$ba620e4c@reader0.news.skynet.be>
Source record: 34738

Hi,

Just found a little schema I would like to build.
http://www.geocities.com/SouthBeach/3433/building.htm
(Not for Pirating! I'm studying for my HAM licence and I want to built it
for learning only!)

In it's final trap it needs the BLY88C, but I've called to several
components shops around,
but none of them sells them. They said that the BLY88C is an old transistor,
and isn't made anymore.

Maybe I could still get one if I wait terrible long ...

Now, is there any replacement for the BLY88C ??
datasheet:
http://www.semiconductors.philips.com/acrobat/datasheets/BLY88C_CNV_2.pdf

A little search brought me to the 2N3632, but I didn't check of this one is
availeble here in Belgium.
(http://members.tripod.com/~Malzev/comp/2n3632.htm)

I hope I will come out.

Kind regards

Gery D.

4236. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 10:26:57 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <6cldfvk9vpovljm7tjapc7ptomv9iidri6@4ax.com>
Source record: 34739

>AD only send samples to an address in the USA . By having it sent to a US
>address I received a sample of 4 RF Log Amps.

I'm in the UK and I managed to get 2 RF log amp samples from AD no problem, sent straight to my door. However, I can't remember who it was I spoke to to get them, was a year ago.

I'll have a nosey.

Clive

4237. Re: Be SURE to oppose Broadband Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 10:51:41 UTC
From: helmsman <helmsman@DELETEmindspring.com>
Message-ID: <qpmdfv00q2ehff6thsq7n2o41hvt9e5vhc@4ax.com>
Source record: 34740
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On Sun, 22 Jun 2003 19:08:33 -0400, user@domain.invalid wrote:

>Why bother? Unless you are a billionaire lining Powell's pockets, he is
>not going to listen.
>
Same reason for voting, if you don't vote, you got no chance and no
squawk no matter what happens. If you vote at least you got a chance.
NEVER GIVE UP!!!!!

4238. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 10:56:25 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bd6pt0qdl1@bob.news.rcn.net>
Source record: 34742

<c.a.m@antijunk3.blueyonder.co.uk> wrote in message
news:27adfvcphl9vclisqnr7hh8ff1tlekdrc5@4ax.com...
>
> It ort to be very easy these days.
>
> All you need is IQ out (just simple low pass filtered), and stuff that
into the
> stereo line in on a modern PC (96dB dynamic range), a bit of software, and
you
> have yourself a top notch any mode RX.

As described in recent issues of QEX.

4239. Re: ALERT- - Rid your PC of Illegal Images rrrrrrrr 630 [926/3]

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 11:09:17 UTC
From: G&#65533;ry Duyck <gery@duyck-co.be>
Message-ID: <3ef6df50$0$304$ba620e4c@reader0.news.skynet.be>
Source record: 34741

What's that all about!?

Any computer deletes his files by ereasing the name and start and end of the file in the HDD index file.
The actual data is still physic on your HDD, thats how undelete programs are working.
(scaning evry cluster to re-index your HDD!)
But if you write other files in the mean time on your HDD, the clusters with your deleted files in, will be
considered as empty, so it will be overwritten.

The solutions to make that nobody, even the FBI, can recover your deleted data is to defragment your HDD.
All the files will be placed nice next to eachother without spaces or fragmented files between them.

"Alex" <ve3leg@hotmail.com> wrote in message
news:3EF48238.8070409@hotmail.com...
> Can this software delete you? or delete my e-mail address from spammers
> lists?
>
> srxins@yhd65.com wrote:
> > You're in Serious Trouble - It's a Proven Fact!
> >
> > FBI FORENSICS CAN FIND DELETED FILES
> >
> > THERE ARE THINGS ON YOUR COMPUTER
> > THAT YOU THOUGHT YOU DELETED.
> >
> > !!!!BUT THEY ARE STILL THERE!!!
> >
> > Click here for details on the EVIDENCE ELIMINATOR
> >
> > Clear your computer of incriminating files
> > that you cannot delete.
> >
> > www.removefiles.com
> >
> > THIS IS A MUST READ!!!!
> >
> > www.removefiles.com
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> > POST
> > From: srxins@yhd65.com
> > Newsgroups:
de.comp.os.unix.linux.hardware,rec.radio.amateur.homebrew,alt.wholesale
> > Subject: ALERT- - Rid your PC of Illegal Images
rrrrrrrr 630 [927/3]
> >
> >
> > You're in Serious Trouble - It's a Proven Fact!
> >

> > FBI FORENSICS CAN FIND DELETED FILES
> >
> > THERE ARE THINGS ON YOUR COMPUTER
> > THAT YOU THOUGHT YOU DELETED.
> >
> > !!!!BUT THEY ARE STILL THERE!!!
> >
> > Click here for details on the EVIDENCE ELIMINATOR
> >
> > Clear your computer of incriminating files
> > that you cannot delete.
>

4240. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 13:39:34 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bd73etglm1@bob.news.rcn.net>
Source record: 34744

<c.a.m@antijunk3.blueyonder.co.uk> wrote in message
news:733efvo8nr693ge17lh2dsvqostsrmb4c2@4ax.com...
>
> >> All you need is IQ out (just simple low pass filtered), and stuff that
> >into the
> >> stereo line in on a modern PC (96dB dynamic range), a bit of software,
and
> >you
> >> have yourself a top notch any mode RX.
> >
> >As described in recent issues of QEX.
>
> oh right.
>
> Is the software freely available ?

Yes and no.

The s/w is written in Visual 'something' and requires a DSP library from Intel(?). The library was free when the article was written, but now costs money. N4HY was complaining about that in a letter to QEX - but 'HY is very skilled in such s/w and could/should write the necessary routines. Maybe he will, he has the demo hardware boards.

Sorry, not a perfect world yet.

73 de bob w3otc

4241. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 14:19:52 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <733efvo8nr693ge17lh2dsvqostsrmb4c2@4ax.com>
Source record: 34743

>> All you need is IQ out (just simple low pass filtered), and stuff that
>into the
>> stereo line in on a modern PC (96dB dynamic range), a bit of software, and
>you
>> have yourself a top notch any mode RX.
>
>As described in recent issues of QEX.

oh right.

Is the software freely available ?

Clive

4242. Re: Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 17:47:19 UTC
From: k7itm@aol.com
Message-ID: <3200347.0306230947.146e64f4@posting.google.com>
Source record: 34745

As they say, a picture is worth a thousand words. Any chance you could put a picture of them on your aol homepage or somewhere else on the web so we could see what they look like?

In general, though I can usually identify the capacitor type pretty well, specific characteristics are best found from manufacturer's data, and you may not have enough info to get that deep into it. It's possible to get a rude surprise if you assume too much. For example, if you use a non-temperature-stable cap in the frequency-determining part of an oscillator, chances are pretty good you won't be very happy with the performance. It's good to get an idea early on in your homebrewing about where you can make general substitutions and where the specific characteristics of a part are important. Can't say whether experience, elmering, reading or what will be the best way for you to get that feel for parts.

Cheers,
Tom

kgb190@aol.com (Kgb190) wrote in message news:<20030622112754.06805.00001341@mb-m19.aol.com>...
> Before beginning a project of my own, Ive been following alot of good advice
> from the web,and have been pracice soldering on old circuit boards, at the same
> time becoming familiar with the types and values of components. Several
> question were raised that I dont remember reading about, anyone out there know?
> O.K. Im looking at 5 capacitors, 4 of them are ceramic disk, the fourth is a
> green disk... what type are the green disks? All five have the numbers 27
> on them, #1 just says 27, #2 says27 but is underlined,, #3 says 27 underlined
> w/ blue cap, #4 same but w/ yellow cap, and green capacitor has a purple cap.
> At first I assumed the underline was to ease reading the value, now I am not
> sure, is it significant?... I also remember reading about colored dot
> nomenclature, and colored stripes on some caps, but not about the "dipped"
> top. Tolerance code?
> Thanks in advance for the education, hope I can repay you someday...

4243. helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 18:09:19 UTC
From: jnguyen78@hotmail.com
Message-ID: <470559a8.0306231009.63b4ad85@posting.google.com>
Source record: 34746

Hello,

I'm trying to build a helical resonator. In particular, I want to use loop coupling, to couple power into the resonator, and most text I have found on this has been a bit vague.
I'll be using a signal generator as the source, (50ohm) so I figured I'd want to take an existing BNC cable, cut off one end, and expose the inner conductor, twist that into a loop, and use that as coupling loop. I suppose I could just solder it directly to the helix and use tap coupling, but I'm not quite sure about the load so I think loop coupling would be best.
Anyway, what do I do with the loop? In particular, am I supposed to solder the open end of my single loop to the wall of the resonator shield? I noticed that this is done for waveguides. If not, then what do I do with the open end of the single loop?
Also, where do I place the loop. From what I've read, you're supposed to place it just below the cold end of the helix, and perpendicular to the helix axis. Also, should the diameter of the loop be the same as the diameter of the helix itself?
And while I'm asking questions, how should I solder the helix to the shield? In particular, what I've read suggests that you want a "low resistance joint". From what I've read, this means that I would want the surfaces to be mated to be clean. What kind of solder should I use, or rather, do I want to try to mate the copper helix directly to the shield, without using solder?
Thanks in advance to anyone who can send me some information on this. This is the first time I've done this, so sorry if the answers to my questions are a bit obvious!

4244. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 18:58:40 UTC
From: Bis Wichy <wd0hco@ev1.net>
Message-ID: <BB1CB7BE.4496%wd0hco@ev1.net>
Source record: 34597
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

>> Why bother? Unless you are a billionaire lining Powell's pockets, he is
>> not going to listen.
>>
> Same reason for voting, if you don't vote, you got no chance and no
> squawk no matter what happens. If you vote at least you got a chance.
> NEVER GIVE UP!!!!!

I love it! You guys don't see the FCC's plan do you?

This stuff is so incredibly broad banded that it will also affect Standard AM Broadcast, shortwave as well as over the air TV Broadcasts.

Ahhh, but if your rich, you can afford to buy a new Digital AM DAB receiver or XM Satellite receiver to listen to that dimwit Rush Limburger... and of course.....

We ALL have to buy that Digital HDTV if you wanna watch TV over the air or keep your old NTSC TV and pay for a Satellite or cable TV hookup.

Either way, you gonna have to spend money to keep what you got now!

See the plan now ???

No wonder Commissioner Powell jr is getting a big woody over this!

This one technology alone will FORCE everyone to go digital. Like it or not.

So just sit there, take it and don't say anything.

It's what they are hoping for.

- WDï¿½HCO -

4245. Re: VHF/UHF antenna switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 19:01:32 UTC
From: averyfineman@aol.com
Message-ID: <20030623150132.04554.00000636@mb-m20.aol.com>
Source record: 34598

In article <3ef667d3$0$642$a729d347@news.telepac.pt>, "Luis Rolo"
<luisrolo@netcabo.pt> writes:

>I am thinking about building a remote antenna switch mostly for 2m, 70 cm
>and a discone (25Mhz-1.3Ghz) antennas. I suppose that common relays do not
>work at these frequencies, where can I find cheap RF relays for my project?
>Any clue? Max power level is 100W.
>thanks in advance,
>
>Luis Rolo
>CT2INY
>OPO, PT

Luis, some relays will work very well on up to 1 GHz but it requires
a lot of inspection of the construction of the relay to see if it will
work or not.

Specific RF relays are designed for an absolute minimum of series
inductance. Some heavy power relays are made that way with the
contact assembly having no flexible wire to the moving contact.
Another factor is a near-constant low capacitance from the moving
contact to any other conductor plus very low capacitance between
contacts when the contact is open. The idea is to keep a constant
impedance through maintaining all conductor paths as uniform as
possible whether the contacts are open or closed.

An example of a rare surplus relay good for RF is some 28 VDC
coil designs found in aircraft electronics of the 1950s through 1960s.
These are easy to spot since they have a fully enclosed round can
having a flange mount with all connections to contacts and coil on a
glass-metal hermetic seal header. In the USA Allied Signal made
tens of thousands of those for military electronics. Their internal
contact structure is extremely short and the worst-case capacity
of an open pin to any other thing in the structure is 2 pFd (typically
it was just under 1 pFd). Contact sets typically made were 4PDT,
6PDT, and 2PDT.

The same general contact structure scheme was used by Hewlett-
Packard Instrument Division (now Agilent) a decade or so later for
low-power-handling RF relays. Extremely-short contact structures
with uniform spacing of the armature to the rest of the relay body.

As an example of the contact structure being short is the slide-switch
attenuator assemblies for low-cost 1-2-3-5-10-20-40 db switchable
coaxial attenuators. Those use older, very cheap-to-make slide
switches (not the DIP switch kind used in computer electronics)

which have very short uniform contact paths and are useable to
about 500 MHz before their discontinuities become apparent.
Note: Accuracy of attenuation there is limited by the resistor pad
choices, not the switching contacts. Such cheap slide switches
could handle 2 A at 115 VAC easily; 100 W in a 50 Ohm system
has a 1.4 A RMS current at 71 V.

Some of the home TV external switches might be suitable if
modified for a coil acuator instead of lever or knob. Those are
cheap but the construction style varies widely...they need to be
disassembled to see what is what inside. For the US market
they claim operation to 800 MHz, but makers seldom rate the
VSWR for any of those products. A relay or switch VSWR of as
high as 2:1 wouldn't make much difference in a system.

3-pole power relays could be used effectively in a coaxial system
if they have an absolute minimum of flexible wire to the armature
contacts with contacts side-by-side. Use only the center of the
side-by-side contacts and ground the contact poles on either side
of center. "Wasteful" of contacts, yes, but that insures uniformity
of all conductors in a stripline sort of structure. [yes, I've done that
and at higher RF power levels successfully up to VHF]

Len Anderson
retired (from regular hours) electronic engineer person

4246. Re: Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 19:13:24 UTC
From: kgb190@aol.com
Message-ID: <20030623151324.23300.00001326@mb-m26.aol.com>
Source record: 34599

Tom, thanx for reply, its really no deal yet, just education, when I ran across the apparent same value capacitor I became curious as to whether an underlined value # actually makes it a different # (e.g. instead of a value of 27p, is the underlined 27 really 2.7p?) Same with the colored top, but you basically reaffirmed my thought that if I want to build something and have it work, especially my first time, I should probably go with a kit, or at least new components for a positive identification .

T.M

4247. Re: helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 20:20:09 UTC
From: Skipp says its all rocket science <rocketmannotelton@yahoo.com>
Message-ID: <bd7ndphvf2@woodrow.ucdavis.edu>
Source record: 34600

General Rules of thumb Jason...

Make the resonator structure as rigid as possible.

One thought would be to copy a common bandpass cavity loop, it's size, construction and mounting. As an example, use a quarter size disc of metal; drill a hole in the center for (and mount) a chassis mount coax connector (your bnc as an example); make up a rectangular shape loop from number 12 solid copper wire. Mount the loop into the cavity by holding it captive over a large enough hole with three common 6/32 screws at the edge of the disc. You can rotate the loop for coupling when the screws are loose.

Too much loop size is not a big problem...
Too little loop size will show up as serious insertion loss.
Common examples from commercial cavities work... ie a 2.5 inch loop works for 445Mhz.

chow for now, good luck
skipp
http://sonic.ucdavis.edu

: Jason <jnguyen78@hotmail.com> wrote:
: Hello,
: I'm trying to build a helical resonator. In particular, I want to
: use loop coupling, to couple power into the resonator, and most text I
: have found on this has been a bit vague.
: I'll be using a signal generator as the source, (50ohm) so I figured
: I'd want to take an existing BNC cable, cut off one end, and expose
: the inner conductor, twist that into a loop, and use that as coupling
: loop. I suppose I could just solder it directly to the helix and use
: tap coupling, but I'm not quite sure about the load so I think loop
: coupling would be best.
: Anyway, what do I do with the loop? In particular, am I supposed to
: solder the open end of my single loop to the wall of the resonator
: shield? I noticed that this is done for waveguides. If not, then
: what do I do with the open end of the single loop?
: Also, where do I place the loop. From what I've read, you're
: supposed to place it just below the cold end of the helix, and
: perpendicular to the helix axis. Also, should the diameter of the
: loop be the same as the diameter of the helix itself?
: And while I'm asking questions, how should I solder the helix to the
: shield? In particular, what I've read suggests that you want a "low
: resistance joint". From what I've read, this means that I would want
: the surfaces to be mated to be clean. What kind of solder should I
: use, or rather, do I want to try to mate the copper helix directly to

: the shield, without using solder?
: Thanks in advance to anyone who can send me some information on this.
: This is the first time I've done this, so sorry if the answers to my
: questions are a bit obvious!

4248. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 21:35:18 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bd7var$ev7$1@bob.news.rcn.net>
Source record: 34603
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

"Bis Wichy" <wd0hco@ev1.net> wrote in message
news:BB1CB7BE.4496%wd0hco@ev1.net...
>
> >> Why bother? Unless you are a billionaire lining Powell's pockets, he is
> >> not going to listen.
> >>
> > Same reason for voting, if you don't vote, you got no chance and no
> > squawk no matter what happens. If you vote at least you got a chance.
> > NEVER GIVE UP!!!!!
>
> I love it! You guys don't see the FCC's plan do you?
>
> This stuff is so incredibly broad banded that it will also affect Standard
> AM Broadcast, shortwave as well as over the air TV Broadcasts.
>
> Ahhh, but if your rich, you can afford to buy a new Digital AM DAB
receiver
> or XM Satellite receiver to listen to that dimwit Rush Limburger... and of
> course.....

1) AM IBOC is fragile enough that I think it would also be affected. And
may never get the stamp of approval because of how bad it sounds. And
because each station
occupies three channels. In itself, AM IBOC may kill AM for most people.

2) Limburger isn't on XM.

4249. RF Emission levels from Wireless LAN Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 22:08:45 UTC
From: MikeN <mnewman@clear.net.nz>
Message-ID: <9juefvgdr9sqio14li1h6rm8bit7560c02@4ax.com>
Source record: 34601

How do the field intensity levels from a WLAN in a dwelling compare with those from a cell-phone tower site?

I want to compare emissions from this type of equipment, which Joe Public can happily buy at the local computer store and install in home or office, with the emission levels froom cell-phone sites, which are the source of intense public reaction whenever a new cell-phone tower is proposed in our community.

Does anyone one know of documented rf emission levels from Wireless LAN equipment, the sort of thing that might be used in a dwelling or office for computer interconnection.

Thanks

MikeN

4250. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 22:09:25 UTC
From: James <jimbo@nospam.com>
Message-ID: <3EF77A95.4E4C91DD@nospam.com>
Source record: 34602
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Would the interference from these broad banded power line signals
disturb the digital signals as well as analog ?
I know the hdtv is higher up the the analog tv signals.

73 jimbo

Bis wrote:

> >> Why bother? Unless you are a billionaire lining Powell's pockets, he is
> >> not going to listen.
> >>
> > Same reason for voting, if you don't vote, you got no chance and no
> > squawk no matter what happens. If you vote at least you got a chance.
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> This stuff is so incredibly broad banded that it will also affect Standard
> AM Broadcast, shortwave as well as over the air TV Broadcasts.
>
> Ahhh, but if your rich, you can afford to buy a new Digital AM DAB receiver
> or XM Satellite receiver to listen to that dimwit Rush Limburger... and of
> course.....
>
> We ALL have to buy that Digital HDTV if you wanna watch TV over the air or
> keep your old NTSC TV and pay for a Satellite or cable TV hookup.
>
> Either way, you gonna have to spend money to keep what you got now!
>
> See the plan now ???
>
> No wonder Commissioner Powell jr is getting a big woody over this!
>
> This one technology alone will FORCE everyone to go digital. Like it or not.
>
> So just sit there, take it and don't say anything.
>
> It's what they are hoping for.
>
> - WDï¿½HCO -

4251. PLL Synthesizer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 22:34:58 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <bd7vahaae03$1@news.t-online.com>
Source record: 34604
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew

Hi!

I need some help with modifying a direct conversion receiver. This receiver has a crystal oscillator. As I don't want to change the XTAL for every frequency, I want to replace the whole oscillator circuit with a PLL synthesizer covering 5-18 MHz. As I don't know how to do a PLL circuit I need your help. May be you can provide me some schematics...
I thought about using an AD9850 DDS circuit but this seems to be a little bit oversized :-)

Thank you very much!

Yours,
Andreas Weller, DF1PAW

4252. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 22:43:29 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <bd7vqg$730$01$1@news.t-online.com>
Source record: 34605

> >> All you need is IQ out (just simple low pass filtered), and stuff that
> >into the
> >> stereo line in on a modern PC (96dB dynamic range), a bit of software,
and
> >you
> >> have yourself a top notch any mode RX.

Hi!
May be you can have a look at http://www.gnu.org/software/gnuradio/ which is
currently under development.

Yours,
Andreas Weller, DF1PAW

4253. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-23 22:56:03 UTC
From: Shephed <roll1up@smkey.com>
Message-ID: <7ALJa.229917$VP.48434664@twister.neo.rr.com>
Source record: 34606
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

"Bis Wichy" <wd0hco@ev1.net> wrote in message
news:BB1CB7BE.4496%wd0hco@ev1.net...
>
> >> Why bother? Unless you are a billionaire lining Powell's pockets, he is
> >> not going to listen.
> >>
> > Same reason for voting, if you don't vote, you got no chance and no
> > squawk no matter what happens. If you vote at least you got a chance.
> > NEVER GIVE UP!!!!!
>
> I love it! You guys don't see the FCC's plan do you?
>
> This stuff is so incredibly broad banded that it will also affect Standard
> AM Broadcast, shortwave as well as over the air TV Broadcasts.
>
> Ahhh, but if your rich, you can afford to buy a new Digital AM DAB
receiver
> or XM Satellite receiver to listen to that dimwit Rush Limburger... and of
> course.....
>
> We ALL have to buy that Digital HDTV if you wanna watch TV over the air or
> keep your old NTSC TV and pay for a Satellite or cable TV hookup.
>
> Either way, you gonna have to spend money to keep what you got now!
>
> See the plan now ???
>
> No wonder Commissioner Powell jr is getting a big woody over this!
>
> This one technology alone will FORCE everyone to go digital. Like it or
not.
>
> So just sit there, take it and don't say anything.
>
> It's what they are hoping for.
>
> - WD&#65533;HCO -
>
Still sore about the 2000 election I see. :-)

4254. Re: PLL Synthesizer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 00:34:30 UTC
From: Graham <g0nbd@hotmail.com>
Message-ID: <bd86apfhn1@newsg2.svr.pol.co.uk>
Source record: 34607
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew

The DDS and your pc is prob the easey option these days ! get the DDS on its development board ready made ! - all you need is a high freq ref osc - if your know anyone who can work with 'PIC' software then you could use one of those to tune the DDS via its serial link and support a display

G.

4255. Re: helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 00:57:43 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <mg7ffvg5j44p9uqot511rnob4kd1ufb2u7@4ax.com>
Source record: 34608

I strongly recommend reading Zverev "Handbook of Filter Synthesis."
If you are feeling flush with cash, you can buy it, but be prepared to
pay something in the $200 range. Your local library can obtain it on
inter-library loan for you, or you can find it in a university library
if you have access to one.

In any event, Zverev has a chapter on designing helical resonators and
discusses loop coupling. It's the only extensive printed reference
that I've found on helical resonator implementation of filters. (Not
that I've attempted an exhaustive search, mind you.)

Zverev will take you through the prototype filter design and then
converting it to a helical resonator. Zverev can be heavy going at
times, but the effort invested in reading it and working through
examples will be repaid in saved dead ends and wasted time if you
start off with experimentation.

As far as your specific question goes, if you are talking about a true
helical resonator, usually the feed is via a tap from ground, and you
will likely find that the tap is quite low, often a fraction of a turn
from ground. Coupling between adjacent resonators is usually via
capactive coupling through an appature near the the top.

If you are talking about a true cavity design, or a transmission line
cavity as is often used in VHF or UHF bands, the loop size depends on
the insertion loss desired, which is tied to the desired bandwidth.
But, at 150 MHz, a typical coupling loop ranges from 3/4" or
thereabouts to 2" or so long. But, I think you mean a helical
resonator, which uses taps, not loop coupling to get into/out of the
filter.

If you have a two-way repair shop in your neighborhood, I bet a visit
coupled with a kind request will yield a couple old helical resonators
out of a junked 150 or 450 MHz radio, so you can see how it is done by
Motorola or GE. Or, if that fails, you can order an inexpensive
helical resonator made by Toko from DigiKey and take it apart.

Jack K8ZOA

On 23 Jun 2003 11:09:19 -0700, jnguyen78@hotmail.com (Jason) wrote:

>Hello,
>
> I'm trying to build a helical resonator. In particular, I want to
>use loop coupling, to couple power into the resonator, and most text I
>have found on this has been a bit vague.
> I'll be using a signal generator as the source, (50ohm) so I figured

>I'd want to take an existing BNC cable, cut off one end, and expose
>the inner conductor, twist that into a loop, and use that as coupling
>loop. I suppose I could just solder it directly to the helix and use
>tap coupling, but I'm not quite sure about the load so I think loop
>coupling would be best.
> Anyway, what do I do with the loop? In particular, am I supposed to
>solder the open end of my single loop to the wall of the resonator
>shield? I noticed that this is done for waveguides. If not, then
>what do I do with the open end of the single loop?
> Also, where do I place the loop. From what I've read, you're
>supposed to place it just below the cold end of the helix, and
>perpendicular to the helix axis. Also, should the diameter of the
>loop be the same as the diameter of the helix itself?
> And while I'm asking questions, how should I solder the helix to the
>shield? In particular, what I've read suggests that you want a "low
>resistance joint". From what I've read, this means that I would want
>the surfaces to be mated to be clean. What kind of solder should I
>use, or rather, do I want to try to mate the copper helix directly to
>the shield, without using solder?
> Thanks in advance to anyone who can send me some information on this.
> This is the first time I've done this, so sorry if the answers to my
>questions are a bit obvious!

4256. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 01:18:11 UTC
From: Alan <abs@hotmail.com>
Message-ID: <e05ec31df3dd61a4d7c523044050e184@news.meganetnews.com>
Source record: 34609
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

```
1. Limbaugh IS on XM - speak of what you know
2. Limbaugh ABHORS big government, so you're a little askew in
trashing him. Clearly you 'know what you know but have never listened'
If he had his way in the issue, the FCC would be abolished.
3. Get over it.
```

"Shephed" <roll1up@smkey.com> wrote in message
news:7ALJa.229917$VP.48434664@twister.neo.rr.com...
>
> "Bis Wichy" <wd0hco@ev1.net> wrote in message
> news:BB1CB7BE.4496%wd0hco@ev1.net...
> >
> > >> Why bother? Unless you are a billionaire lining Powell's pockets, he
is
> > >> not going to listen.
> > >>
> > > Same reason for voting, if you don't vote, you got no chance and no
> > > squawk no matter what happens. If you vote at least you got a chance.
> > > NEVER GIVE UP!!!!!
> >
> > I love it! You guys don't see the FCC's plan do you?
> >
> > This stuff is so incredibly broad banded that it will also affect
Standard
> > AM Broadcast, shortwave as well as over the air TV Broadcasts.
> >
> > Ahhh, but if your rich, you can afford to buy a new Digital AM DAB
> receiver
> > or XM Satellite receiver to listen to that dimwit Rush Limburger... and
of
> > course.....
> >
> > We ALL have to buy that Digital HDTV if you wanna watch TV over the air
or
> > keep your old NTSC TV and pay for a Satellite or cable TV hookup.
> >
> > Either way, you gonna have to spend money to keep what you got now!
> >
> > See the plan now ???
> >
> > No wonder Commissioner Powell jr is getting a big woody over this!
> >

> > This one technology alone will FORCE everyone to go digital. Like it or
> not.
> >
> > So just sit there, take it and don't say anything.
> >
> > It's what they are hoping for.
> >
> > - WD�HCO -
> >
> Still sore about the 2000 election I see. :-)
>
>

4257. Re: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 05:03:20 UTC
From: Fred <ft@peoplepc.com>
Message-ID: <vffmsrdihjq95d@corp.supernews.com>
Source record: 34610
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Hey Servis,

Could you give me the prices of a few of your competitors? I wouldn't want to pay too much...

Fred

"Servis za elektroniku &#65533;" <servis_za_elektroniku@yahoo.com> wrote in message news:71725543.0306170003.45a9d995@posting.google.com...
> Used, working Philips QB5/1750 (50 USD/piece).
>
> More info on:
>
> http://www.geocities.com/servis_za_elektroniku/My_page.html

4258. Re: VHF/UHF antenna switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 05:11:06 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <230620032211061627%silli_artie@hotmail.com>
Source record: 34611

In article <3ef667d3$0$642$a729d347@news.telepac.pt>, Luis Rolo
<luisrolo@netcabo.pt> wrote:

> I am thinking about building a remote antenna switch mostly for 2m, 70 cm
> and a discone (25Mhz-1.3Ghz) antennas. I suppose that common relays do not
> work at these frequencies, where can I find cheap RF relays for my project?
> Any clue? Max power level is 100W.
> thanks in advance,
>
> Luis Rolo
> CT2INY
> OPO, PT

eBay commonly has SMA relays, from companies such as Agilent (HP),
Transco, dow-key, and others. These are typically good up to 8 GHz.

New, these things cost hundreds of dollars. Used on eBay, $25 or so.

Because of variations in how people name the things they're selling,
look for "SMA" and narrow your search from there. They usually appear
as SMA switches, SMA relays.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2540905632&category=2
6211

lists a dow-key SPDT latching relay. I also saw some SP6T switches.

This auction is very useful for some of the comments it makes. These
relays aren't meant for "hot switching" of RF power. The power limits
depend on frequency -- 100 watts to 1 GHz, 50 watts to 4 GHz. If
you're switching more than 35 watts at over 4 GHz, you're way out of my
league!

You can also pull down a series of reference documents and applications
notes from Agilent website on RF relays.

73--

>
>

4259. Crystal instead of tank in regenerative detector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 07:05:09 UTC
From: The Eternal Squire <eternalsquire@comcast.net>
Message-ID: <rPydnaHTcvaXaWqjXTWJiQ@comcast.com>
Source record: 34612

Hi,

I am wanting to use a regenerative detector after downconversion.
Can anyone tell me how I can adapt a regenerative receiver to
use a crystal rather than an LC tank?

Thanks in advance,

WA2JAZ

4260. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 10:43:20 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <bpagfv4j0tjq9hsnhjg7301r5if8suuimj@4ax.com>
Source record: 34613

>> >> All you need is IQ out (just simple low pass filtered), and stuff that
>> >into the
>> >> stereo line in on a modern PC (96dB dynamic range), a bit of software,
>and
>> >you
>> >> have yourself a top notch any mode RX.
>
>Hi!
>May be you can have a look at http://www.gnu.org/software/gnuradio/ which is
>currently under development.

Cool.

Clive

4261. WTB: Some quality PCB mount BNC sockets!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 10:43:55 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <bqtL63UrtC++EwwN@philstheboss.freeserve.co.uk>
Source record: 34614

I am after any quantity up to 20 pieces of pcb mounted, right angles BNC sockets.

Now not the ordinary el cheapo's.

I require the type with a centrally located centre pin in relation to the four mounting pins.

Those that work in RF will know that the inexpensive connectors have an offset centre pin. I cannot use these.

I have 10 pre-drilled PCB's each requiring two connectors and I really do not wish to butcher these boards.

Come in Greenpar all is forgiven.

Can anyone help me with new or good used?

Tnx
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4262. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 11:13:42 UTC
From: Dick <boleyd@yahoo.com>
Message-ID: <GnWJa.4973$Hw.4341444@news2.news.adelphia.net>
Source record: 34615

A $1300.00 sound card and you are ready for CW through HDTV! I believe that SSB and the PSK modes can use the normal SB cards.
Dick N3HKN

<c.a.m@antijunk3.blueyonder.co.uk> wrote in message news:bpagfv4j0tjq9hsnhjg7301r5if8suuimj@4ax.com...
>
> >> >> All you need is IQ out (just simple low pass filtered), and stuff that
> >> >into the
> >> >> stereo line in on a modern PC (96dB dynamic range), a bit of software,
> >and
> >> >you
> >> >> have yourself a top notch any mode RX.
> >
> >Hi!
> >May be you can have a look at http://www.gnu.org/software/gnuradio/ which is
> >currently under development.
>
> Cool.
>
> Clive
>

4263. Easy to built FM transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 12:20:57 UTC
From: G&#65533;ry Duyck <gery@duyck-co.be>
Message-ID: <3ef8419b$0$305$ba620e4c@reader0.news.skynet.be>
Source record: 34616

Hi,

I'm looking for a easy to built FM (98-108 Mhz) radio circuit,
with at least 1W output, to broadcast my CD's or MP3 to any
radio around the house in good (stereo?) quality!

It must have an external audiosource (like: CD-player, PC, ...).

It will be my first homebrew transmitter, so I hope to get some
building explanations with the schema.

But with only a schema I would be happy to.

Kind Regards

Gery Duyck.

4264. Re: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 12:22:40 UTC
From: Shiva <helpdesk@666.com>
Message-ID: <koXJa.12253$Kg7.7492@nwrdny01.gnilink.net>
Source record: 34617
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

"Fred" <ft@peoplepc.com> wrote in message
news:vffmsrdihjq95d@corp.supernews.com...
> Hey Servis,
>
> Could you give me the prices of a few of your competitors? I wouldn't
want to pay too much...
>
> Fred

Hey, you have the same ads in your neck of the woods... Guess what i did,
Mr 807? I picked up a pair of 1625's at a flea (they're basically 807's
with 12V (annoying, huh?) fills & weird base), and re-based them with
regular octal bases, 'cos I only had *one* 7-pin base that fit them (came
from the back of an RCA scope toob) Used regular cheap-o epoxy as base
glue, and had them running all- out in a silly SE[fake]T stereo amp on a
0-30kHz sweep for half an hour - the epoxy holds... Thus far I'm running
tinto all the probs I run into with 6bg6's, and then some. In short, the
tubes talk to each other (there's about 2 inches 'tween them, and plate
wires are not shielded - sticking your hand 'tween them killse the
crosstalk), will oscilate at several MHz when driven hard at low freq's
(perfectlyy shaped oval RF bursts at the leading edge, minute changes in
wiring layout kill them - i'm thinkin' of trying RF chokes at the plate
caps - works with *other* sweep toobs...). Fred, I think your fave toob is
a *sweep toob*. Now, whatddaya' have to say to *that*, hmm? They shoo'
look right, though, real retro...
-dim��T
Used Chinese 6550's matched set of 3 (65 USD/piece)
Used clear-top 12AU7s, matched set of 12, (45 USD/piece)
more info at http://aol.com

>
> "Servis za elektroniku ĐŽ" <servis_za_elektroniku@yahoo.com> wrote in
message
> news:71725543.0306170003.45a9d995@posting.google.com...
> > Used, working Philips QB5/1750 (50 USD/piece).
> >
> > More info on:
> >
> > http://www.geocities.com/servis_za_elektroniku/My_page.html
>
>

4265. Re: PLL Synthesizer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 13:07:36 UTC
From: Jan Wagner <Jan.Wagner@cern.ch>
Message-ID: <bd9ietpck1@sunnews.cern.ch>
Source record: 34618
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew

"Andreas Weller" <weller@andreas-weller.de> wrote in message
news:bd7vahaae03$1@news.t-online.com...
> I need some help with modifying a direct conversion receiver.
> This receiver has a crystal oscillator. As I don't want to change
> the XTAL for every frequency, I want to replace the whole
> oscillator circuit with a PLL synthesizer covering 5-18 MHz.
> As I don't know how to do a PLL circuit I need your help.
> May be you can provide me some schematics...
> I thought about using an AD9850 DDS circuit but this seems
> to be a little bit oversized :-)

If you don't want very high stability then a DDS chip together with a cheap non-compensated crystal oscillator reference would be the nicest way to go, if for some reason or other you need a sine wave output. Even for a digital PLL with loadable dividers you'll need to do some programming before it works.

http://www.dckits.com/plls.htm
http://www.minikits.com.au/kits4.html
http://www.minikits.com.au/tech.html#dds

You could also use something based on a cheap CD4046 phase locked loop, together with a resistor-and-potentiometer voltage divider on the VCO pin instead of the direct connection to the VCO pin - this should let you multiply the freq upwards, IIRC. I can't remember 100% sure if this really was how I did it once, but at least the 4046 datasheet and application notes should contain some further infos and schematics on the freq multiplier arrangement... But this resistor setup is not something you should do if you want freq precision...

regards,
- Jan

--
****
Always remember you're unique, just like everyone else.

high voltage at http://www.hut.fi/~jwagner/tesla/
Jan OH2GHR - GSM +358-41-4682893
jwagner@cc.hut.fi - Jan.Wagner@cern.ch

4266. Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 13:28:49 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BB1DCA50.1D607%stewart@say.net>
Source record: 34619
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Is there a way to disable the speaker on a speaker/microphone in such a way as to return the audio output back to the radio's internal speaker?

I have a handheld that is often used on my desk and would like the audio to come from the better quality speaker within the radio rather than the speaker in the microphone.

Note: if it can be done, this modification has to be done within the microphone itself as the microphone connector on the radio is an odd one that I simply cannot find a connector to fit.

General advice on what to do is all that is really necessary (I can figure out the wiring myself is I have a general idea what to do).

Thanks for any assistance offered.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

4267. Re: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 14:39:26 UTC
From: Fred Nachbaur <fnachbaur@netscape.net>
Message-ID: <3EF862B8.6020301@netscape.net>
Source record: 34620
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Shiva wrote:
> "Fred" <ft@peoplepc.com> wrote in message
> news:vffmsrdihjq95d@corp.supernews.com...
>
>>Hey Servis,
>>
>>Could you give me the prices of a few of your competitors? I wouldn't
>
> want to pay too much...
>
>>Fred
>
>
> Hey, you have the same ads in your neck of the woods...

Well, maybe, but the message you're replying to was a different Fred.
(There really is more than one in the world!) ;-)

> Guess what i did,
> Mr 807? I picked up a pair of 1625's at a flea (they're basically 807's
> with 12V (annoying, huh?) fills & weird base), and re-based them with
> regular octal bases, 'cos I only had *one* 7-pin base that fit them (came
> from the back of an RCA scope toob)

Cool! So you now have a 12BG6. Aren't very many of those in the world!

> Used regular cheap-o epoxy as base
> glue, and had them running all- out in a silly SE[fake]T stereo amp on a
> 0-30kHz sweep for half an hour - the epoxy holds...

Cool! I went the other way recently, and plunked a couple 832A's on
bases from dead 807's (even the toob world has organ donors), both sides
wired in parallel. So that basically gives me 807s with twice the Gm and
half the plate resistance. And a really odd-looking thing it is, looks a
bit like R2D2 perched on a garbage can.

> Thus far I'm running
> tinto all the probs I run into with 6bg6's, and then some. In short, the
> tubes talk to each other (there's about 2 inches 'tween them, and plate
> wires are not shielded - sticking your hand 'tween them killse the
> crosstalk),

I suspect that effect is related to the RF oscillation issue you discuss
next...

> will oscilate at several MHz when driven hard at low freq's
> (perfectlyy shaped oval RF bursts at the leading edge, minute changes in
> wiring layout kill them - i'm thinkin' of trying RF chokes at the plate
> caps - works with *other* sweep toobs...).

Yeah, that can help. Screen stoppers are very important, right at the
socket, with no bypass on the socket side of the resistor.

> Fred, I think your fave toob is
> a *sweep toob*. Now, whatddaya' have to say to *that*, hmm?

It certainly can be used for that. In fact, the original 6BG6 was just
an 807 plunked onto an octal base. They musta had lots of them left over
and were trying to find new markets. "Hey let's plunk it on an octal and
sell it to the TV guys! They haven't been around much, and won't realize
that we're pawning off war-surplus 807's on 'em."

Surely you've seen this:
http://www.dogstar.dantimax.dk/tubestuf/gzot.htm . I'd contemplated
entering it in the currently ongoing r.a.t. "ugly amp competition",
except that it's not an amp. Well, actually, the 807 part of it is an
amp... it's the 6C4 that's the oscillator. Hmm...

> They shoo'
> look right, though, real retro...

Don't they just? You gotta have bright red plate wires. CRT cable is
just perfect for that. btw- you can form it into shape using a hot-air gun.

Cheers,
Fred
--
+---+
| Music: http://www3.telus.net/dogstarmusic/ |
| Projects: http://dogstar.dantimax.dk |
+---+

4268. Re: Easy to built FM transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 14:44:36 UTC
From: Itsme <jranieuws@skynet.be>
Message-ID: <3ef863d5$0$1056$ba620e4c@reader1.news.skynet.be>
Source record: 34621

Hi G�ry

Denk dat je beter geholpen wordt bij bvb nl.radio.amateur. Hier wordt niet
vaak geantwoord op vragen die betrekking (kunnen) hebben op piraterij.
Als antwoord op uw vraag zie bvb
http://www.qsl.net/yo5ofh/links/transmitters.htm

73 de Jos

"G�ry Duyck" <gery@duyck-co.be> schreef in bericht
news:3ef8419b$0$305$ba620e4c@reader0.news.skynet.be...
> Hi,
>
> I'm looking for a easy to built FM (98-108 Mhz) radio circuit,
> with at least 1W output, to broadcast my CD's or MP3 to any
> radio around the house in good (stereo?) quality!
>
> It must have an external audiosource (like: CD-player, PC, ...).
>
> It will be my first homebrew transmitter, so I hope to get some
> building explanations with the schema.
>
> But with only a schema I would be happy to.
>
> Kind Regards
>
> Gery Duyck.
>
>

4269. Re: helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 15:46:53 UTC
From: k7itm@aol.com
Message-ID: <3200347.0306240746.139c45c@posting.google.com>
Source record: 34622

jnguyen78@hotmail.com (Jason) wrote in message
news:<470559a8.0306231009.63b4ad85@posting.google.com>...
> Hello,
>
> I'm trying to build a helical resonator. In particular, I want to
> use loop coupling, to couple power into the resonator, and most text I
> have found on this has been a bit vague.
> I'll be using a signal generator as the source, (50ohm) so I figured
> I'd want to take an existing BNC cable, cut off one end, and expose
> the inner conductor, twist that into a loop, and use that as coupling
> loop. I suppose I could just solder it directly to the helix and use
> tap coupling, but I'm not quite sure about the load so I think loop
> coupling would be best.
...
Though it's more usual to tap up on the helix for coupling, there's no reason you can't use a loop. Since the loop coupling is primarily magnetic, there is no need for the loop to share an electrical connection with the helical resonator structure. I would return the coax center (in the form of a loop) to the coax shield. Then you can position that loop in the resonator structure near the bottom of the coil and rotate it and/or move it in and out to adjust the coupling. Consider how the magnetic field of the helix must look to get an idea of the positioning of the loop for maximum coupling.

You could also adjust the coupling of an e-field probe near the top of the helix, or of a tap near the bottom by putting a small trimmer cap between the tap and the feedline. In the case of coupling through a tap or probe, grounding to the helix shield becomes important, especially for a tap low down on the tank. The tap position (coupling in general) will adjust the loaded Q of the resonator, and presumably that's why you are interested in being able to vary the coupling. Will you be coupling the output through an aperature to another resonator? You'll probably want adjustable coupling out of the second resonator, and adjustable coupling between the resonators, and you likely won't want to go beyond a two-resonator structure for your initial experiments.

Cheers,
Tom

4270. Re: Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 15:52:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0306240752.3256f7ed@posting.google.com>
Source record: 34623

kgb190@aol.com (Kgb190) wrote in message
news:<20030623151324.23300.00001326@mb-m26.aol.com>...
> Tom, thanx for reply, its really no deal yet, just education, when I ran across
> the apparent same value capacitor I became curious as to whether an underlined
> value # actually makes it a different # (e.g. instead of a value of 27p, is the
> underlined 27 really 2.7p?) Same with the colored top, but you basically
> reaffirmed my thought that if I want to build something and have it work,
> especially my first time, I should probably go with a kit, or at least new
> components for a positive identification .

You bring up a good point here. Though I'd expect 27 is probably 27pF
whether it's underlined or not, I can tell you for sure that something
like "470" could be either 470pF or 47pF...the latter being read as
"4, 7, and zero following zeros". It's a really good idea if you're
going to be doing much building to get some simple test equipment that
lets you actually make measurements of part values. You can build
your own capacitance measuring device, or buy an inexpensive kit.
Also nice to be able to measure small inductors as well.

Cheers,
Tom

4271. Re: Valves - Philips QB5/1750

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 16:02:21 UTC
From: Airy R Bean <SPAM@trap>
Message-ID: <3ef876f4_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 34625
Cross-posted to: rec.audio.tubes,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Hardly "Cool". In fact, quite the opposite - quite
hot to the touch.

Fred Nachbaur <fnachbaur@netscape.net> wrote in message
news:3EF862B8.6020301@netscape.net...
> Cool! So you now have a 12BG6. Aren't very many of those in the world!

4272. Re: Easy to built FM transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 16:07:38 UTC
From: G&#65533;ry Duyck <gery@duyck-co.be>
Message-ID: <3ef876bc$0$1051$ba620e4c@reader1.news.skynet.be>
Source record: 34624

Mijn doel is niet om te pirateren!
Ik wil eerst en vooral wat praktijkervaring opdoen over hoe zenders werken.

Het neveneffect van overal in en rond je huis je MP3 playlist te kunnen
beluisteren
is een pluspunt.

Ik ga immers in september het examen voor radioamateur gaan meedoen.
Misschien bouw ik dan later nog een 2m toestel.

73
Gery D.

"Itsme" <jranieuws(remove-this)@skynet.be> wrote in message
news:3ef863d5$0$1056$ba620e4c@reader1.news.skynet.be...
> Hi G&#65533;ry
>
> Denk dat je beter geholpen wordt bij bvb nl.radio.amateur. Hier wordt niet
> vaak geantwoord op vragen die betrekking (kunnen) hebben op piraterij.
> Als antwoord op uw vraag zie bvb
> http://www.qsl.net/yo5ofh/links/transmitters.htm
>
> 73 de Jos
>
> "G&#65533;ry Duyck" <gery@duyck-co.be> schreef in bericht
> news:3ef8419b$0$305$ba620e4c@reader0.news.skynet.be...
> > Hi,
> >
> > I'm looking for a easy to built FM (98-108 Mhz) radio circuit,
> > with at least 1W output, to broadcast my CD's or MP3 to any
> > radio around the house in good (stereo?) quality!
> >
> > It must have an external audiosource (like: CD-player, PC, ...).
> >
> > It will be my first homebrew transmitter, so I hope to get some
> > building explanations with the schema.
> >
> > But with only a schema I would be happy to.
> >
> > Kind Regards
> >
> > Gery Duyck.
> >
> >
>

>

4273. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 17:28:49 UTC
From: stanb45@dial.pipex.com
Message-ID: <slrnbfg2ml.mqc.stanb45@citadel.metropolis.local>
Source record: 34626
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On Mon, 23 Jun 2003 22:09:25 GMT, James <jimbo@nospam.com> wrote:
>Would the interference from these broad banded power line signals
>disturb the digital signals as well as analog ?
>I know the hdtv is higher up the the analog tv signals.

If they're using a similar system to that in Europe, there's some
info here: http://www.qsl.net/rsgb_emc/

--
Cheers,
Stan Barr stanb .at. dial .dot. pipex .dot. com
(Remove any digits from the addresses when mailing me.)

The future was never like this!

4274. Re: Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 18:20:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <vfh5j0nkq9qnc0@corp.supernews.com>
Source record: 34627

Quite a few years ago I bought a really cheap (think it was $10) DVM
that has a capacitance measuring function, with just this purpose in
mind. It's perfectly adequate for the job -- and it turned out to be the
meter I use just about daily as a DVM, to boot. Capacitance measuring
capability is a fairly common "extra" on cheap DVMs, so it shouldn't be
hard to find a similar one.

Roy Lewallen, W7EL

Tom Bruhns wrote:
> kgb190@aol.com (Kgb190) wrote in message
news:<20030623151324.23300.00001326@mb-m26.aol.com>...
>
>>Tom, thanx for reply, its really no deal yet, just education, when I ran across
>>the apparent same value capacitor I became curious as to whether an underlined
>>value # actually makes it a different # (e.g. instead of a value of 27p, is the
>>underlined 27 really 2.7p?) Same with the colored top, but you basically
>>reaffirmed my thought that if I want to build something and have it work,
>>especially my first time, I should probably go with a kit, or at least new
>>components for a positive identification .
>
>
> You bring up a good point here. Though I'd expect 27 is probably 27pF
> whether it's underlined or not, I can tell you for sure that something
> like "470" could be either 470pF or 47pF...the latter being read as
> "4, 7, and zero following zeros". It's a really good idea if you're
> going to be doing much building to get some simple test equipment that
> lets you actually make measurements of part values. You can build
> your own capacitance measuring device, or buy an inexpensive kit.
> Also nice to be able to measure small inductors as well.
>
> Cheers,
> Tom

4275. Class-E Components

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 18:57:41 UTC
From: j_b_doherty@yahoo.ca
Message-ID: <a209176f.0306241057.41153e9c@posting.google.com>
Source record: 34628
Cross-posted to: sci.electronics,rec.radio.amateur.homebrew

Hello everybody...

I've designed a class-E AM transmitter using a circuit simulation package, and am now attempting to actually build the circuit, in spite of limited experience in sourcing components. As I've designed it, I'm driving the switch at about 8MHz, and as a consequence of the series resonance and high Q of the series-tuned branch of the circuit (~17pF cap in series with ~23uH inductor), I get a peak current of about 750mA (peak at 8MHz) through this branch of the circuit. The RF choke sources about 450mA of DC current from a 9V supply. Some of my many questions are...

1) Will I be able to implement and test this circuit on a breadboard?
2) Any recomendations on a good MOSFET for the switch? I have a bunch of IRF540s - will these work?
3) Any suggestions on where to get a leaded RF choke (say 25uH) capable of handling the required current at 8MHz?
4) The large current through the series-tuned branch results in a HUGE sinusoidal voltage across both the inductor and capacitor (almost 1000V peak at 8MHz!!!); will I be able to find a leaded tunable capacitor capable of withstanding these high voltage and currents? (All the spec. sheets I've looked at for tunable capacitors only describe a maximum DC current).

Also, I was hoping to use stranded wire to make the inductor/transmitting antenna in the series-tuned branch (a 10cm diameter air-cored pancake coil); can anyone offer any guidance on the necessary specs for the stranded wire (# of strands, individual strand gauge) and on where to get it?

Many thanks for any possible assistance,
HM

4276. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 19:29:02 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <kG1Ka.11504$xF.804919@newsfep2-win.server.ntli.net>
Source record: 34629
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Dwight Stewart" <stewart@say.net> wrote in message
news:BB1DCA50.1D607%stewart@say.net...
>
> Is there a way to disable the speaker on a speaker/microphone in such a
> way as to return the audio output back to the radio's internal speaker?
>
> I have a handheld that is often used on my desk and would like the audio
> to come from the better quality speaker within the radio rather than the
> speaker in the microphone.
>
> Note: if it can be done, this modification has to be done within the
> microphone itself as the microphone connector on the radio is an odd one
> that I simply cannot find a connector to fit.
>
> General advice on what to do is all that is really necessary (I can
figure
> out the wiring myself is I have a general idea what to do).
======================
Having 2 HTs with external speaker /mike myself ,both have a dual 2.5mm
(stereo) / 3.5 mm (mono) combined plug to fit the HT.
The 2.5mm (stereo) type part is for the microphone and the PTT . The 3.5mm
(mono) plug part is for the loudspeaker

If you don't want to use the external speaker but wish to use the speaker
fitted inside the radio , you have to make a short lead with a piece of
audio (stereo) cable , a 2.5mm stereo plug and a 2.5 mm stereo socket.

Connect the lead to plug and socket and check that the 3 wires being
Mike -PTT - Common (screen) are correct

Plug the 2.5 mm plug into the HT and the 2.5mm socket into the 2.5 mm plug
part of the mike/speaker lead.
The 3.5 mm plug part on the mike/speaker lead remains unconnected.
On the HT the 3.5 mm socket for an external speaker remains unconnected to
anything external.

There you are

Good luck

Frank GM0CSZ / KN6WH

PS :If you dont like the above arrangement with an unconnected plug part on
the mike/speaker lead , you can fit a tiny box with properly spaced 2.5 mm
stereo socket and 3.5 mm socket to accept the mike /speaker lead plug and

connect the stereo cable bit via the box . Instead of the tiny box you can use a plastic or metal 35 mm photo roll can ....cheap and cheerful.

4277. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 19:49:26 UTC
From: Andrew Tweddle <sarason@alphalink.com.au>
Message-ID: <3f00f28d@news.alphalink.com.au>
Source record: 34567

Tim Shoppa wrote:

> I'm presuming these tools must exist and let them lay out circuits that
> aren't 90% ground plane. As a hobbyist or ham we have the luxury of
> putting down a lot of copper when we aren't sure about something, but
> the consumer GHz devices I've disassembled don't have any spare space!
>
> Now, while I certainly cannot afford any of these simulation tools, I
> still would like to learn what's out there. Can anyone give me some leads?
>
> On a more primitive simulation note, I found some cool web tools that do
> the textbook PC-board calculations. Like
>
> http://www.emclab.umr.edu/pcbtlc2/
>
> Tim.

Try Puff from Caltech at http://www.gerstlauer.de/puff/ or
http://www.its.caltech.edu/~mmic/puff.html

Regards Andrew

4278. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 21:48:30 UTC
From: Steve KA4TMB <steven.heyde@comcast.net>
Message-ID: <my2dnQxNMIO2WmWjXTWJjQ@comcast.com>
Source record: 34630
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

Dwight,

My speaker/mic connector is different from that of Frank's HT. I have 2 Santec HTs, a 144uP and a 142. Both take a mini 6-pin DIN with screw-on sleeve. I had to attack the problem from the mic. itself. I found an old micro-mini SPST slide switch from something long forgotten in my junk box. I had to drill 4 tiny holes in the mic. housing. One for each end of the switch for mounting screws, and two side-by-side for the slide. I dressed the two holes up with a micro-file, cut and prepped the wires going to the speaker portion of the mic., mounted the switch after checking the circuit for function and put the mic back together. Now, when I use the speaker/mic, I can turn the remote speaker off while the main speaker stays on in the HT, or turn on the remote speaker if I need to hold it closer to my ear in a noisy environment. The speaker inside the HT stays on all the time no matter what is done with the spkr/mic.

73, Steve KA4TMB

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:kG1Ka.11504$xF.804919@newsfep2-win.server.ntli.net...
>
> "Dwight Stewart" <stewart@say.net> wrote in message
> news:BB1DCA50.1D607%stewart@say.net...
> >
> > Is there a way to disable the speaker on a speaker/microphone in such
a
> > way as to return the audio output back to the radio's internal speaker?
> >
> > I have a handheld that is often used on my desk and would like the
audio
> > to come from the better quality speaker within the radio rather than the
> > speaker in the microphone.
> >
> > Note: if it can be done, this modification has to be done within the
> > microphone itself as the microphone connector on the radio is an odd one
> > that I simply cannot find a connector to fit.
> >
> > General advice on what to do is all that is really necessary (I can
> figure
> > out the wiring myself is I have a general idea what to do).
> ======================
> Having 2 HTs with external speaker /mike myself ,both have a dual 2.5mm
> (stereo) / 3.5 mm (mono) combined plug to fit the HT.
> The 2.5mm (stereo) type part is for the microphone and the PTT . The

3.5mm
> (mono) plug part is for the loudspeaker
>
> If you don't want to use the external speaker but wish to use the speaker
> fitted inside the radio , you have to make a short lead with a piece of
> audio (stereo) cable , a 2.5mm stereo plug and a 2.5 mm stereo socket.
>
> Connect the lead to plug and socket and check that the 3 wires being
> Mike -PTT - Common (screen) are correct
>
> Plug the 2.5 mm plug into the HT and the 2.5mm socket into the 2.5 mm
plug
> part of the mike/speaker lead.
> The 3.5 mm plug part on the mike/speaker lead remains unconnected.
> On the HT the 3.5 mm socket for an external speaker remains unconnected
to
> anything external.
>
> There you are
>
> Good luck
>
> Frank GM0CSZ / KN6WH
>
> PS :If you dont like the above arrangement with an unconnected plug part
on
> the mike/speaker lead , you can fit a tiny box with properly spaced 2.5
mm
> stereo socket and 3.5 mm socket to accept the mike /speaker lead plug and
> connect the stereo cable bit via the box . Instead of the tiny box you
can
> use a plastic or metal 35 mm photo roll can ....cheap and cheerful.
>
>
>

4279. Re: Easy to built FM transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 22:06:09 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <CBz9QQBRtM++EwRy@philstheboss.freeserve.co.uk>
Source record: 34631

Gery,

>I'm looking for a easy to built FM (98-108 Mhz) radio circuit,
>with at least 1W output, to broadcast my CD's or MP3 to any
>radio around the house in good (stereo?) quality!

I offer just what you're after:

http://www.transmittersrus.com/shop/plpro31wt.htm

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4280. Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 22:22:04 UTC
From: clutch@lycos.com
Message-ID: <vfhjomji220fa6@corp.supernews.com>
Source record: 34632

I just picked up a IC-706MK2G and with it being 95 degrees outside the thought of playing with it in the house rather than in the truck seems like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess I could buy one but it would seem that this would be a good homebrew project.

I would love to learn about shoestring homebrew solutions. Cheaper the better.

73, wes, kc8spr
--
Reply to:
Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE dot COM
Lycos address is a spam trap.

4281. Testing TMOS FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 22:32:19 UTC
From: jgboyles@aol.com
Message-ID: <20030624183219.11524.00001052@mb-m13.aol.com>
Source record: 34633

Hi,
Anybody got a cheap and dirty way of testing mrf150's out of circuit? My homebrew amp using 8 150's died, and some or all of the fets failed. At $50 a pop I don't want to throw away any that have life left in them. I did the usual static ohmic checks in circuit, and only identified one that looked bad. Also on application of dc bias, all 8 began to turn on. At very low power levels all 8 seemed to amplify, but with normal drive levels, no rf output. These are 4 push-pull sections with 2 fets per section.
73 Gary N4AST

4282. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 22:57:02 UTC
From: jgboyles@aol.com
Message-ID: <20030624185702.11524.00001054@mb-m13.aol.com>
Source record: 34634

>Sadly, I don't have a 20A 13.8v powersupply. Guess
>I could buy one but it would seem that this would be a good homebrew
>project.

Yes, it is a good homebrew project, but like everything else nowdays you can buy something cheaper than you can build. Radio Shack, and Samlex offer SMPS for under $100. May have to look for them on sale.
To build, you will need an expensive transformer, filter capacitor, full wave bridge rectifier, Series pass transistor, or Darlington array, plus various other components. I built mine, but I have a really big junk box.
There are projects in the ARRL handbook that will do what you wish.
By the way, if you only want to recieve when you are indoors, then things get quite simpler and less expensive.
73 Gary N4AST

4283. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 23:00:45 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <erlhfvof555spoao9r8mj2er9dpm2rrt8q@4ax.com>
Source record: 34635

On Tue, 24 Jun 2003 18:22:04 -0400, clutch@lycos.com wrote:

>I just picked up a IC-706MK2G and with it being 95 degrees outside the
>thought of playing with it in the house rather than in the truck seems
>like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
>I could buy one but it would seem that this would be a good homebrew
>project.
>
>I would love to learn about shoestring homebrew solutions. Cheaper
>the better.
>
One option that works for me is one of those gelcell powerpacks with
enough juice to start your car. They have a 17 AH battery inside.

If you are using high power for transmit, you may want to tap the
battery directly rahther than using the lighter outlet.

This covers what you want, plus you are set for emergency operations
from various locations, plus you can jump start your car.

About $50 if you shop well.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4284. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 23:51:56 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <rz5Ka.11804$xF.842550@newsfep2-win.server.ntli.net>
Source record: 34637

> I just picked up a IC-706MK2G and with it being 95 degrees outside the
> thought of playing with it in the house rather than in the truck seems
> like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
> I could buy one but it would seem that this would be a good homebrew
> project.
>
> I would love to learn about shoestring homebrew solutions. Cheaper
> the better.
==========
Wes , You don't need a 20 A power supply unit for this application . A much smaller unit would do in combination with a battery . I expect the radio to draw about 2 Amperes as an rx and while operating SSB at the nominal rated power of 100 Watts PEP , 7.5 -10 Amperes on average (if using speech compression) . Without speech compression the average current on transmit will be lower .
A current of 20 Amps is only required during power peaks . So ,with a 6-8 Amperes power supply unit set at 13.8 V in combination with a reasonable size Lead Acid battery ,you will be 'home and dry'

On the choice of battery , the best would be a deep cycle marine type . However with the battery continously connected to the live power supply unit a car battery would be quite acceptable.

Remains the choice of battery type from a ventilation point of view . A sealed or a no-maintenance battery can be safely kept in the shack near the radio . A battery which can be topped up with distilled /de-ionised water should be installed in a well ventilated area. The capacity of the battery depends on your operating habits eg tx duration /power /mode. With a supposedly rx/tx duration ratio of 50 /50 it will be unlikely that the average current drawn will exceed 8 Amperes.

So my questimate is a 6 amperes power supply unit and a 25 - 40 Ah battery wil be fine ,even for contesting .

Note : Use a good quality power supply unit with a clean 13.8 V - DC output fitted with an internal diode such that when the AC power supply fails , the battery will not drain via the PSU . When using an external diode (to be rated for not less than twice the max PSU current and fitted to a heat sink) the PSU output voltage should be set at 13.8 + 0.7 = 14.5 volts , 0.7 being the voltage drop across the diode.

Good luck

Frank GM0CSZ / KN6WH

PS: When using a sealed battery ,some people claim that the charging voltage should not exceed 13.5 V .
However ,today I checked a commercial battery charger for batteries powering electric golf carts ,which had its output set at 14.0 Volts.

4285. Re: helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-24 23:52:18 UTC
From: jnguyen78@hotmail.com
Message-ID: <470559a8.0306241552.5f647f80@posting.google.com>
Source record: 34636

Thanks to everyone who has replied to this post thus far. The
information you've provided me has been quite useful. With regard's
to Tom's questions, no, actually I'm only interested in a single
resonator. In particular, I'm interested in the resonant voltage rise
at the hot end, but the design equations are the same as for helical
filters, and there's been much more information on the net on that.
Yes, you're correct in assuming that I want to be able to adjust the
coupling because I'm not entirely sure what the load on the hot end
will be like. I expect that the load will be mainly capacitive, which
from what I understand should shift the resonant frequency somewhat.
I had read about being able to adjust a tap with a trimmer cap in
series between the cold end and the shield, but I'd also read that
with both a probe and adjustable tap methods, there is no DC short to
ground.

Thanks again!

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0306240746.139c45c@posting.google.com>...
> jnguyen78@hotmail.com (Jason) wrote in message
news:<470559a8.0306231009.63b4ad85@posting.google.com>...
> > Hello,
> >
> > I'm trying to build a helical resonator. In particular, I want to
> > use loop coupling, to couple power into the resonator, and most text I
> > have found on this has been a bit vague.
> > I'll be using a signal generator as the source, (50ohm) so I figured
> > I'd want to take an existing BNC cable, cut off one end, and expose
> > the inner conductor, twist that into a loop, and use that as coupling
> > loop. I suppose I could just solder it directly to the helix and use
> > tap coupling, but I'm not quite sure about the load so I think loop
> > coupling would be best.
> ...
> Though it's more usual to tap up on the helix for coupling, there's no
> reason you can't use a loop. Since the loop coupling is primarily
> magnetic, there is no need for the loop to share an electrical
> connection with the helical resonator structure. I would return the
> coax center (in the form of a loop) to the coax shield. Then you can
> position that loop in the resonator structure near the bottom of the
> coil and rotate it and/or move it in and out to adjust the coupling.
> Consider how the magnetic field of the helix must look to get an idea
> of the positioning of the loop for maximum coupling.
>
> You could also adjust the coupling of an e-field probe near the top of
> the helix, or of a tap near the bottom by putting a small trimmer cap

> between the tap and the feedline. In the case of coupling through a
> tap or probe, grounding to the helix shield becomes important,
> especially for a tap low down on the tank. The tap position (coupling
> in general) will adjust the loaded Q of the resonator, and presumably
> that's why you are interested in being able to vary the coupling.
> Will you be coupling the output through an aperature to another
> resonator? You'll probably want adjustable coupling out of the second
> resonator, and adjustable coupling between the resonators, and you
> likely won't want to go beyond a two-resonator structure for your
> initial experiments.
>
> Cheers,
> Tom

4286. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 01:27:33 UTC
From: Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbfhuk5.rds.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 34638

On Sun, 22 Jun 2003 11:59:30 +0000, Jerry Flanders <SeeSignature@below.com> wrote:
> source. Each is rated at 400 watts. Seems to me I should be able to
> parallel their outputs to get 800 watts if I can lock them in phase.
>
> Seems like I should be able to lock the phases if I go inside and
> rewire so that one's master 60 cycle clock/oscillator/whatever is
> controlling both of them.

IIRC, 'neon john' has done exactly that. Seems I saw that in the RV
newsgroup.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4287. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 01:30:33 UTC
From: Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbfhupp.rds.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 34639

On Tue, 24 Jun 2003 23:00:45 GMT, Gary S <Idontwantspam@net> wrote:
> One option that works for me is one of those gelcell powerpacks with
> enough juice to start your car. They have a 17 AH battery inside.

> About $50 if you shop well.

Watch the sales at HarborFreight.com, often their 24AH unit is $50.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4288. kenwood HT pin out

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 05:37:04 UTC
From: "Steve B. KC2GOG" <KC2GOG@amsat.org>
Message-ID: <4yaKa.61599$8f.19913530@news4.srv.hcvlny.cv.net>
Source record: 34640

before i start making an adapter from scratch, has anyone made or know where a schematic that will adapt my kenwood thd7ag HT to use a standard headset as found on alinco, icom and radioshack HT's

the kenwood diagram i have uses the pins reversed (2.5mm for speaker and 3.5mm for mic) and the PTT is active by shorting the two grounds together

i plan on making a universal adapter set to use a commonly purchased headset/speaker mic with my kenwood TH-d7ag and yaesu ft-817.

4289. Huge group for transmitter and radio freaks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 07:20:19 UTC
From: "Alfred Zoer (A*L*I)" <alinter@alwaysaccess.nl>
Message-ID: <bdbifg$899$1@hermes.castel.nl>
Source record: 34641

Huge group for transmitter and radio freaks

that like to repair our build the radio or transmitter theirselves. Also ham stuff and heaps of other stuff. Join up for free,
Share info, tips, tricks, schematics, I my self wil ad new schematics every month and i think a lot of members wil do the same.
Greetings from the moderator Alfred

here the groups adress

http://groups.yahoo.com/group/The_Radio_and_Transmitter_Electronics

We also hope you can ad a link to this group.
As you know. how more members we have the more powerfull and usseble the group will be for their members...
P.S. Don't forget to join up!!

Group Email Addresses

Post message: The_Radio_and_Transmitter_Electronics@yahoogroups.com
Subscribe: The_Radio_and_Transmitter_Electronics-subscribe@yahoogroups.com
Unsubscribe:
The_Radio_and_Transmitter_Electronics-unsubscribe@yahoogroups.com
List owner: The_Radio_and_Transmitter_Electronics-owner@yahoogroups.com

4290. Re: Class-E Components

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 07:22:46 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0306242322.6c74f6a7@posting.google.com>
Source record: 34642
Cross-posted to: sci.electronics,rec.radio.amateur.homebrew

j_b_doherty@yahoo.ca (Hambone McKool) wrote in message
news:<a209176f.0306241057.41153e9c@posting.google.com>...
Hi,
1) Will I be able to implement and test this circuit on a breadboard?
Breadboards are no good for the RF circuitry due to enormous stray
capacitances. The "dead bug", "Manhattan" or "rats nest" styles seem
to be much better.

> 2) Any recomendations on a good MOSFET for the switch? I have a bunch
> of IRF540s - will these work?
IRF5xx and IRF6xx seem to be good for RF PAs. Give it a try !

> 3) Any suggestions on where to get a leaded RF choke (say 25uH)
> capable of handling the required current at 8MHz?
Rob it from a failed switched PSU (e.g. from a PC or a copier) and
eventually rewind.

> 4) The large current through the series-tuned branch results in a HUGE
> sinusoidal voltage across both the inductor and capacitor (almost
> 1000V peak at 8MHz!!!); will I be able to find a leaded tunable
> capacitor capable of withstanding these high voltage and currents?
> (All the spec. sheets I've looked at for tunable capacitors only
> describe a maximum DC current).
a/ A huge voltage on a series circuit at resonance ? I would expect a
high current and small voltage as the series circuit should have a
small impedance at resonance.
b/ A maximum DC current of a capacitor is always zero :-(I expect it
is a typo
c/ You need a vacuum variable capacitor or a wide-spaced air one. See
e.g. http://www.mainlinegroup.co.uk/jacksonbrothers/5720.htm

Inform us about your achievements, please, more guys are interested in
class E PAs !

BR from Ivan

4291. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 07:25:07 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BB1EC692.1D62B%stewart@say.net>
Source record: 34643
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Frank Dinger" wrote:

> (snip) On the HT the 3.5 mm socket for an external
> speaker remains unconnected to anything external.
>
> There you are

So, let me make sure I understand what you're saying. Broken down to its most basic level (the sentence above), leaving nothing connected to the speaker part of the connector will restore the radio's internal speaker? Is this true even if a connector is present but nothing connected to it?

My radio uses a four connection mini phone plug that screws onto the radio. When the external microphone is connected, the speaker inside the radio is disabled. The collars on the connector are speaker, ground, PTT, and Mic.

Obviously, there is no way to use another connector. However, I could cut the speaker wires inside the microphone to that part of the connector. Do you think that will do what I'm after - allow me to hear audio through the radio's speaker instead of the microphone's speaker?

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

4292. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 07:25:17 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BB1EC69C.1D62B%stewart@say.net>
Source record: 34644
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Steve KA4TMB" wrote:

> My speaker/mic connector is different from that
> of Frank's HT. I have 2 Santec HTs, a 144uP and
> a 142. Both take a mini 6-pin DIN with screw-on
> sleeve. I had to attack the problem from the mic.
> itself. I found an old micro-mini SPST slide
> switch from something long forgotten in my junk
> box. I had to drill 4 tiny holes in the mic.
> housing. One for each end of the switch for
> mounting screws, and two side-by-side for the
> slide. I dressed the two holes up with a micro-
> file, cut and prepped the wires going to the
> speaker portion of the mic., mounted the switch
> after checking the circuit for function and put
> the mic back together. Now, when I use the
> speaker/mic, I can turn the remote speaker off
> while the main speaker stays on in the HT, or
> turn on the remote speaker if I need to hold it
> closer to my ear in a noisy environment. The
> speaker inside the HT stays on all the time no
> matter what is done with the spkr/mic.

My radio seems different from both yours and Frank's. My Yaesu VX-7R is has a four connection mini phone plug that screws onto the radio. When the external microphone is connected, the speaker inside the radio is disabled.

The connectors are speaker, ground, PTT, and Mic. Sadly, the manual says nothing about which goes to which pin on the connector, but that shouldn't be too difficult to figure out. Likewise, I have no idea how Yaesu has wired up the radio's connector inside the radio.

Obviously, cutting the speaker wires inside the microphone would disable the microphone's speaker, but that would probably leave me with no speaker at all. However, if I read correctly, Frank's message seems to suggest that basically disconnecting the speaker inside the microphone will restore the radio's speaker.

If this darn little microphone wasn't so expensive, I'd probably just tear it apart and experiment until I found the solution (or was convinced it wasn't possible). However, since the microphone is so expensive, I thought a message to this newsgroup might be a better way to go before I resort to more drastic measures.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

4293. Re: helical resonator

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 07:47:59 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <nqkifv02te34mps22dcugsmrrrb3kqtd2f@4ax.com>
Source record: 34645

<http://www.widomaker.com/~xsamo/01duplex.htm>
<http://mywebpages.comcast.net/tonne/helical.html>

A couple of helical filter links.

Looks like the 6meter version uses a loop for coupling.

Clive

4294. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 09:53:44 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <XjeKa.271$QA2.29595@newsfep2-win.server.ntli.net>
Source record: 34646
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

> My radio seems different from both yours and Frank's. My Yaesu VX-7R is
> has a four connection mini phone plug that screws onto the radio. When the
> external microphone is connected, the speaker inside the radio is
disabled.
==========
Indeed your HT is different from the older units I have. So you can ignore
my story.

Now knowing your model I'll try to find the external speaker/mike
connections.

It is possible that by plugging the speaker/mike plug it into the HT the
internal speaker is disabled through a mechanical switch inside the HT. Then
you have a problem.
However if disabling the speaker is done electronically by linking 2 pins in
the above plug , you could insert a short piece of cable with plug and
socket with the appropriate wiring connected which negates this 'connection'
.

I'll try to find the VX-7R circuit diagramme (somewhere ,perhaps on the NET)
and will come back to you .
Pse give me a few days.

Frank GM0CSZ / KN6WH

4295. FA: xfmrs, chokes, Millen worm drive..

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 12:03:50 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <GcgKa.20630$3o3.1616823@bgtnsc05-news.ops.worldnet.att.net>
Source record: 34647

12H/75ma NIB CHOKE
7.5V/25A MASSIVE FIL XFMR
6.3V/1.5A NIB
MILLEN WORM DRIVE
JOHNSON AIR VAR 150 PF

+ others
see under seller heytubeguy

4296. "Pi-L net" vs "simple Pi + step-up"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 12:17:02 UTC
From: PaoloC <fake.address@asdrubale.net>
Message-ID: <3ef98b7d$1@news.opennet.it>
Source record: 34648

Hello.
I am in the process of closing my version of N7KSB's milliwatt transmitter (http://www.madisoncounty.net/~kj5tf/n7ksb.html), which uses a 74HC240 as PA.
It works on 30m, so I am basing my design on NORCAL's 38 Special (http://www.norcalqrp.com/kits/38spcl/38sch.html). I also used G4FGP's software to cross-check Pi-L values.

I am having troubles with the output filter/impedance matching network (Pi-L). I have no easy access to technical literature nor an oscilloscope, so I'm writing here.

My achievements so far: PA directly into 50 ohm gives some 10 mW RF on my meter (+25 mA @ 5V). But! PA with an attempt of Pi-L network, into the 50 ohm dummy load doesn't move the RF power meter, but draws +100 mA on key down. Currents are relative to key-up consumption of about 46 mA (yes, I am using a current-hungry design!). There must be some resonance in the Pi-L network...

First of all, can someone please tell me if the following is the correct way of using a Pi-L network? (ASCII drawing follows, view with a fixed-width font)

```
---+-- L1 ---+--- L2 ----
Z_hi C1 C2 Z_low
---+---------+-----------
```

I have seen some designs where hi and low impedance points are swapped. I'm a bit confused because in my understanding a Pi-L network is not a symmetrical quadripole. In my design Z_hi = 50 ohm (load/antenna) and Z_low is somewhere around 10 ohm.

In my first experiment I wound L1 and L2 over T50-2 toroids: do they give too much Q for this kind of application? Should I use air-wound inductors instead?
Should I plug some variable capacitors for C1 and C2 so that I can tune the network?

Second, is there any advantage in using a Pi-L network over a simple Pi network with a matching transformer (about 2:1 winding ratio in my case)? The number of coils to wind is the same, with the exception that the transformer might be a bit more critical (2 windings on one support) for the inexperienced builder. ;-)

With your kind feedback I will set-up a prototype that will be tested with an oscilloscope, but I will have a limited time-slot to use it, so I'd better do as many improvements as possible in advance.

TIA ES 72,
Paolo IK1ZYW

4297. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:07:34 UTC
From: clutch@lycos.com
Message-ID: <vfj7kl326avod7@corp.supernews.com>
Source record: 34649

Gary S. <Idontwantspam@net> wrote:

>On Tue, 24 Jun 2003 18:22:04 -0400, clutch@lycos.com wrote:
>
>>I just picked up a IC-706MK2G and with it being 95 degrees outside the
>>thought of playing with it in the house rather than in the truck seems
>>like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
>>I could buy one but it would seem that this would be a good homebrew
>>project.
>>
>>I would love to learn about shoestring homebrew solutions. Cheaper
>>the better.
>>
>One option that works for me is one of those gelcell powerpacks with
>enough juice to start your car. They have a 17 AH battery inside.

Do you have some links for the gell cells? I'd love to use a gell
cell and some circuitry to keep my radio alive when I start the truck,
also would like to be able to cross band my ft-8900r so I can use my
ht to hit local repeaters with no risk of draining the start battery.
>
>If you are using high power for transmit, you may want to tap the
>battery directly rahther than using the lighter outlet.

Passed on lighter outlet. Using direct battery connection, Both lines
fused for the logical reasons.
>
>This covers what you want, plus you are set for emergency operations
>from various locations, plus you can jump start your car.
>
>About $50 if you shop well.
>
>Happy trails,
>Gary (net.yogi.bear)
>---
>at the 51st percentile of ursine intelligence

Are bears as smart as my dog or as sly as my cat?
>
73, wes, kc8spr
--
Reply to:
Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE dot COM
Lycos address is a spam trap.

4298. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:08:17 UTC
From: clutch@lycos.com
Message-ID: <vfj7m05gs7pk06@corp.supernews.com>
Source record: 34650

Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
wrote:

[snip]

>> About $50 if you shop well.
>
>Watch the sales at HarborFreight.com, often their 24AH unit is $50.
>
>sdb

I am on it!

Wes

--
Reply to:
Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE dot COM
Lycos address is a spam trap.

4299. Re: KEnwood R-5000

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:11:07 UTC
From: AMHAM73 <amham73@connectnet.net>
Message-ID: <LbhKa.79470$Pc5.45450@fed1read01>
Source record: 34651

Dan see URL:
http://www.mods.dk/

"Daniel Clarisse" <daniel.clarisse@pandora.be> wrote in message
news:1ycKa.66335$1u5.5401@afrodite.telenet-ops.be...
> I'm searching for the manual service or/and the instructions manual
> for a Kenwood R-5000 receiver. Against payment of course.
>
>

4300. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:13:12 UTC
From: clutch@lycos.com
Message-ID: <vfj7v8sst92g4f@corp.supernews.com>
Source record: 34652

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote:

>> I just picked up a IC-706MK2G and with it being 95 degrees outside the
>> thought of playing with it in the house rather than in the truck seems
>> like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
>> I could buy one but it would seem that this would be a good homebrew
>> project.
>>
>> I would love to learn about shoestring homebrew solutions. Cheaper
>> the better.
>==========
>Wes , You don't need a 20 A power supply unit for this application . A much
>smaller unit would do in combination with a battery . I expect the radio to
>draw about 2 Amperes as an rx and while operating SSB at the nominal rated
>power of 100 Watts PEP , 7.5 -10 Amperes on average (if using speech
>compression) . Without speech compression the average current on transmit
>will be lower .

Oh, I am liking the way you are thinking. Duty cycle! Sylvan's post
with a source and Gary (net.yogi.bear) suggestion of the jell cell
makes this sound like a real plan.

> A current of 20 Amps is only required during power peaks . So ,with a
>6-8 Amperes power supply unit set at 13.8 V in combination with a reasonable
>size Lead Acid battery ,you will be 'home and dry'
>
>On the choice of battery , the best would be a deep cycle marine type .
>However with the battery continously connected to the live power supply
>unit a car battery would be quite acceptable.
>
>Remains the choice of battery type from a ventilation point of view . A
>sealed or a no-maintenance battery can be safely kept in the shack near
>the radio . A battery which can be topped up with distilled /de-ionised
>water should be installed in a well ventilated area. The capacity of the
>battery depends on your operating habits eg tx duration /power /mode.
>With a supposedly rx/tx duration ratio of 50 /50 it will be unlikely that
>the average current drawn will exceed 8 Amperes.
>
>So my questimate is a 6 amperes power supply unit and a 25 - 40 Ah battery
>wil be fine ,even for contesting .
>
>Note : Use a good quality power supply unit with a clean 13.8 V - DC
>output fitted with an internal diode such that when the AC power supply
>fails , the battery will not drain via the PSU . When using an external
>diode (to be rated for not less than twice the max PSU current and fitted to

>a heat sink) the PSU output voltage should be set at 13.8 + 0.7 = 14.5
>volts , 0.7 being the voltage drop across the diode.

I'll check to see what a Sola power supply runs. Has to be a better
bang for buck than buying a pricy OEM unit.
>
>Good luck
>
>Frank GM0CSZ / KN6WH

73, wes, kc8spr
>
>PS: When using a sealed battery ,some people claim that the charging voltage
>should not exceed 13.5 V .
>However ,today I checked a commercial battery charger for batteries powering
>electric golf carts ,which had its output set at 14.0 Volts.
>

--
Reply to:
Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE dot COM
Lycos address is a spam trap.

4301. Re: "Pi-L net" vs "simple Pi + step-up"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:35:52 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <YyhKa.14926$R73.2777@sccrnsc04>
Source record: 34653

> My achievements so far: PA directly into 50 ohm gives some 10 mW RF on my
> meter (+25 mA @ 5V). But! PA with an attempt of Pi-L network, into the 50
> ohm dummy load doesn't move the RF power meter, but draws +100 mA on key
> down. Currents are relative to key-up consumption of about 46 mA (yes, I
am
> using a current-hungry design!). There must be some resonance in the Pi-L
> network...
>

In the first case, you're measuring all power out. In the second, presumeably the power ~ 10 MHz. They are most likely, significantly different. The primary difference between the Pi and the Pi-L from a operational standpoint is the improved harmonic reduction of the Pi-L. At high powers, this can be significant. At the power level you're contemplating, I doubt your harmonics from a proper Pi design will be troublesome to anyone else and it is easier to stay out of trouble making it work without test equipment if you stick with the Pi.

Go to the WB6BLD website and download the free software named Match2. It will do the design for you. In the case you have mentioned above, the Pi design is simply a shunt input capacitor of 710 pF, a series inductor of 0.355 uH, and a shunt cap of 710 pF to the load.

Regards

W4ZCB

4302. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 13:45:50 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <bdc92h$ri0v0$1@ID-134747.news.dfncis.de>
Source record: 34654

Radio Shack has a solar panel product on sale
until 29Jun. I bought one to supplement my
battery, and was pleasantly surprised to find it
will run, or nearly run, my FT-817. Has a 1.8 amp
output, solar field day just got a lot closer to
reality.

73 es cul

wb3fup
a Salty Bear

<clutch@lycos.com> wrote in message
news:vfj7v8sst92g4f@corp.supernews.com...
> "Frank Dinger" <gm0csz.kn6wh@ntlworld.com>
wrote:
>
> >> I just picked up a IC-706MK2G and with it
being 95 degrees outside the
> >> thought of playing with it in the house
rather than in the truck seems
> >> like a fine plan. Sadly, I don't have a 20A
13.8v powersupply. Guess
> >> I could buy one but it would seem that this
would be a good homebrew
> >> project.
> >>
> >> I would love to learn about shoestring
homebrew solutions. Cheaper
> >> the better.
> >==============
> >Wes , You don't need a 20 A power supply unit
for this application . A much
> >smaller unit would do in combination with a
battery . I expect the radio to
> >draw about 2 Amperes as an rx and while
operating SSB at the nominal rated
> >power of 100 Watts PEP , 7.5 -10 Amperes on
average (if using speech
> >compression) . Without speech compression the
average current on transmit
> >will be lower .
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cycle! Sylvan's post

> with a source and Gary (net.yogi.bear)
suggestion of the jell cell
> makes this sound like a real plan.
>
> > A current of 20 Amps is only required during
power peaks . So ,with a
> >6-8 Amperes power supply unit set at 13.8 V in
combination with a reasonable
> >size Lead Acid battery ,you will be 'home and
dry'
> >
> >On the choice of battery , the best would be a
deep cycle marine type .
> >However with the battery continously connected
to the live power supply
> >unit a car battery would be quite acceptable.
> >
> >Remains the choice of battery type from a
ventilation point of view . A
> >sealed or a no-maintenance battery can be
safely kept in the shack near
> >the radio . A battery which can be topped up
with distilled /de-ionised
> >water should be installed in a well ventilated
area. The capacity of the
> >battery depends on your operating habits eg tx
duration /power /mode.
> >With a supposedly rx/tx duration ratio of 50
/50 it will be unlikely that
> >the average current drawn will exceed 8
Amperes.
> >
> >So my questimate is a 6 amperes power supply
unit and a 25 - 40 Ah battery
> >wil be fine ,even for contesting .
> >
> >Note : Use a good quality power supply unit
with a clean 13.8 V - DC
> >output fitted with an internal diode such that
when the AC power supply
> >fails , the battery will not drain via the PSU
. When using an external
> >diode (to be rated for not less than twice the
max PSU current and fitted to
> >a heat sink) the PSU output voltage should be
set at 13.8 + 0.7 = 14.5
> >volts , 0.7 being the voltage drop across the
diode.
>
> I'll check to see what a Sola power supply runs.

Has to be a better
> bang for buck than buying a pricy OEM unit.
> >
> >Good luck
> >
> >Frank GM0CSZ / KN6WH
>
> 73, wes, kc8spr
> >
> >PS: When using a sealed battery ,some people
claim that the charging voltage
> >should not exceed 13.5 V .
> >However ,today I checked a commercial battery
charger for batteries powering
> >electric golf carts ,which had its output set
at 14.0 Volts.
> >
>
> --
> Reply to:
> Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE
dot COM
> Lycos address is a spam trap.

4303. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 14:19:12 UTC
From: "John R. Strohm" <strohm@airmail.net>
Message-ID: <bdcb93$7rd@library2.airnews.net>
Source record: 34655

How much are they getting for it?

"WB3FUP (Mike Hall)" <wb3fup@msn.com> wrote in message
news:bdc92h$ri0v0$1@ID-134747.news.dfncis.de...
> Radio Shack has a solar panel product on sale
> until 29Jun. I bought one to supplement my
> battery, and was pleasantly surprised to find it
> will run, or nearly run, my FT-817. Has a 1.8 amp
> output, solar field day just got a lot closer to
> reality.
>
> 73 es cul
>
> wb3fup
> a Salty Bear
>
> <clutch@lycos.com> wrote in message
> news:vfj7v8sst92g4f@corp.supernews.com...
> > "Frank Dinger" <gm0csz.kn6wh@ntlworld.com>
> wrote:
> >
> > >> I just picked up a IC-706MK2G and with it
> being 95 degrees outside the
> > >> thought of playing with it in the house
> rather than in the truck seems
> > >> like a fine plan. Sadly, I don't have a 20A
> 13.8v powersupply. Guess
> > >> I could buy one but it would seem that this
> would be a good homebrew
> > >> project.
> > >>
> > >> I would love to learn about shoestring
> homebrew solutions. Cheaper
> > >> the better.
> > >==============
> > >Wes , You don't need a 20 A power supply unit
> for this application . A much
> > >smaller unit would do in combination with a
> battery . I expect the radio to
> > >draw about 2 Amperes as an rx and while
> operating SSB at the nominal rated
> > >power of 100 Watts PEP , 7.5 -10 Amperes on
> average (if using speech
> > >compression) . Without speech compression the

> average current on transmit
> > >will be lower .
> >
> > Oh, I am liking the way you are thinking. Duty
> cycle! Sylvan's post
> > with a source and Gary (net.yogi.bear)
> suggestion of the jell cell
> > makes this sound like a real plan.
> >
> > > A current of 20 Amps is only required during
> power peaks . So ,with a
> > >6-8 Amperes power supply unit set at 13.8 V in
> combination with a reasonable
> > >size Lead Acid battery ,you will be 'home and
> dry'
> > >
> > >On the choice of battery , the best would be a
> deep cycle marine type .
> > >However with the battery continously connected
> to the live power supply
> > >unit a car battery would be quite acceptable.
> > >
> > >Remains the choice of battery type from a
> ventilation point of view . A
> > >sealed or a no-maintenance battery can be
> safely kept in the shack near
> > >the radio . A battery which can be topped up
> with distilled /de-ionised
> > >water should be installed in a well ventilated
> area. The capacity of the
> > >battery depends on your operating habits eg tx
> duration /power /mode.
> > >With a supposedly rx/tx duration ratio of 50
> /50 it will be unlikely that
> > >the average current drawn will exceed 8
> Amperes.
> > >
> > >So my questimate is a 6 amperes power supply
> unit and a 25 - 40 Ah battery
> > >wil be fine ,even for contesting .
> > >
> > >Note : Use a good quality power supply unit
> with a clean 13.8 V - DC
> > >output fitted with an internal diode such that
> when the AC power supply
> > >fails , the battery will not drain via the PSU
> . When using an external
> > >diode (to be rated for not less than twice the
> max PSU current and fitted to
> > >a heat sink) the PSU output voltage should be

> set at 13.8 + 0.7 = 14.5
> > >volts , 0.7 being the voltage drop across the
> diode.
> >
> > I'll check to see what a Sola power supply runs.
> Has to be a better
> > bang for buck than buying a pricy OEM unit.
> > >
> > >Good luck
> > >
> > >Frank GM0CSZ / KN6WH
> >
> > 73, wes, kc8spr
> > >
> > >PS: When using a sealed battery ,some people
> claim that the charging voltage
> > >should not exceed 13.5 V .
> > >However ,today I checked a commercial battery
> charger for batteries powering
> > >electric golf carts ,which had its output set
> at 14.0 Volts.
> > >
> >
> > --
> > Reply to:
> > Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE
> dot COM
> > Lycos address is a spam trap.
>
>

4304. Re: Anybody wired two inverters in parallel?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 16:02:13 UTC
From: Chuck / KE4ETH <chuck_hawks@hotmail.com>
Message-ID: <T%lKa.29086$uK1.27027@fe05.atl2.webusenet.com>
Source record: 34658

Your right, I mistyped the name.
Sorry
Chuck
"funkbastler" <funkbastler@yahoo.com> wrote in message
news:6trbfv48n0vl2f8hurldl2goah26auv2o3@4ax.com...
> On Sun, 22 Jun 2003 09:09:45 -0700, "Chuck / KE4ETH"
> <chuck_hawks@hotmail.com> wrote:
>
> >Jerry,
> >
> >You might try the alt.energy.homebrew newsgroup. Someone there may have
> >already tried and can tell you what would need to be done.
> >
>
> alt.energy.homepower (maybe)??
>
> homebrew doesn't show up on goole or giganews - does it really exist?
>
> -fb-
>

4305. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 16:08:59 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <jshjfvcf9a7ngchr9o0kkm40tk53tmugm9@4ax.com>
Source record: 34656

On Wed, 25 Jun 2003 09:07:34 -0400, clutch@lycos.com wrote:

>Gary S. <Idontwantspam@net> wrote:
>
>>On Tue, 24 Jun 2003 18:22:04 -0400, clutch@lycos.com wrote:
>>
>>>I just picked up a IC-706MK2G and with it being 95 degrees outside the
>>>thought of playing with it in the house rather than in the truck seems
>>>like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
>>>I could buy one but it would seem that this would be a good homebrew
>>>project.
>>>
>>>I would love to learn about shoestring homebrew solutions. Cheaper
>>>the better.
>>>
>>One option that works for me is one of those gelcell powerpacks with
>>enough juice to start your car. They have a 17 AH battery inside.
>
>Do you have some links for the gell cells? I'd love to use a gell
>cell and some circuitry to keep my radio alive when I start the truck,
>also would like to be able to cross band my ft-8900r so I can use my
>ht to hit local repeaters with no risk of draining the start battery.
>>
You could buy just the gel cell, and set up the rest yourself. The
power packs, similar to what AAA uses, are sold at good prices in many
of the warehouse stores such as BJs Wholesale, CostCo, and Sam's Club.
I like the versatility, and my old car had issues with running down
the battery.

>>If you are using high power for transmit, you may want to tap the
>>battery directly rahther than using the lighter outlet.
>
>Passed on lighter outlet. Using direct battery connection, Both lines
>fused for the logical reasons.
>>
I had even seen a setup where someone hardwired an amplifier brick
onto the back of one of these, so he had a way to make his HT into a
highly portable base station for emergency ops.

>>This covers what you want, plus you are set for emergency operations
>>from various locations, plus you can jump start your car.
>>
>>About $50 if you shop well.
>>
>>Happy trails,

>>Gary (net.yogi.bear)
>>----------
>>at the 51st percentile of ursine intelligence
>
>Are bears as smart as my dog or as sly as my cat?
>>
If I was either smart or sly, I wouldn't give a direct answer to that.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4306. fs: BS8 pan-adapter for Kenwood SM220

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 18:22:30 UTC
From: Skipp has for sale A BS8 panadapter <nospamhere@yahoo.com>
Message-ID: <bdcp96$fk0$1@woodrow.ucdavis.edu>
Source record: 34657
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.swap

Hello there,

Thanks for taking a moment to read this post.

I have for sale, an original Kenwood BS8 Pan Adapter Module; works with the SM-220 scope unit.

Comes with the proper cable(s) and works really well, turns out the used unit I bought actually came with one inside... much to the surprise of the previous owner and myself. So I have an extra, of which I bought for almost $200
The Kenwood SM-220 Manual shows how to install the unit, I can also supply a photo copy if asked nicely...

I'm asking $135 or a reasonable offer/trade.

Thanks

SkippNOSPAMPLEASE@pilot.ucdavis.edu

remove the NOSPAMPLEASE to drop me a reply, please no spam.

4307. VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 19:59:23 UTC
From: Charles Cosby <charlescosby@execulink.com>
Message-ID: <vfjvosn6ohv068@corp.supernews.com>
Source record: 34659

Hello,

I bought an Icom IC-12A and instead of buying crystals for it would like to get a VFO. Icom made one for it called a DV-21 but I cannot seem to find one for sale. Would it be possible to rig a different manufacturers VFO to work or are they rig specific?

Thanks
Charles

4308. Re: VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-25 21:17:00 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <Z_mdnevz8vYGjGejXTWJig@ctc.net>
Source record: 34660

>
> I bought an Icom IC-12A and instead of buying crystals for it would like
to
> get a VFO. Icom made one for it called a DV-21 but I cannot seem to find
> one for sale. Would it be possible to rig a different manufacturers VFO
to
> work or are they rig specific?
>

I doubt any other external VFOs were made for the rigs. There were some made by companies called GLB and VHF Engineering. You might be able to find one of those but that was over 25 years ago. I built one of the GLBs for an old Regency crystal controled rigs way back then. YOu might as well chunk the old rig and get a new one for about $ 150 .

4309. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 00:04:45 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <bdddb1$rv08d$1@ID-134747.news.dfncis.de>
Source record: 34661

It was wishful reading on my part - it is 1.8
watts at 15 volts. It is on sale for 19.99.
Sorry if I got you excited at the prospect. It is
still going into the FT817 box. I plan to connect
it to my battery to add to charge when radio not
being used.

73 es cul

wb3fup
a Salty Bear

"John R. Strohm" <strohm@airmail.net> wrote in
message news:bdcb93$7rd@library2.airnews.net...
> How much are they getting for it?
>
> "WB3FUP (Mike Hall)" <wb3fup@msn.com> wrote in
message
> news:bdc92h$ri0v0$1@ID-134747.news.dfncis.de...
> > Radio Shack has a solar panel product on sale
> > until 29Jun. I bought one to supplement my
> > battery, and was pleasantly surprised to find
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> > will run, or nearly run, my FT-817. Has a 1.8
amp
> > output, solar field day just got a lot closer
to
> > reality.
> >
> > 73 es cul
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> > wb3fup
> > a Salty Bear
> >
> > <clutch@lycos.com> wrote in message
> > news:vfj7v8sst92g4f@corp.supernews.com...
> > > "Frank Dinger" <gm0csz.kn6wh@ntlworld.com>
> > wrote:
> > >
> > > >> I just picked up a IC-706MK2G and with it
> > being 95 degrees outside the
> > > >> thought of playing with it in the house
> > rather than in the truck seems
> > > >> like a fine plan. Sadly, I don't have a
20A

> > 13.8v powersupply. Guess
> > > >> I could buy one but it would seem that
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> > > >> project.
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> > > >> I would love to learn about shoestring
> > homebrew solutions. Cheaper
> > > >> the better.
> > > >==============
> > > >Wes , You don't need a 20 A power supply
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> > for this application . A much
> > > >smaller unit would do in combination with a
> > battery . I expect the radio to
> > > >draw about 2 Amperes as an rx and while
> > operating SSB at the nominal rated
> > > >power of 100 Watts PEP , 7.5 -10 Amperes on
> > average (if using speech
> > > >compression) . Without speech compression
the
> > average current on transmit
> > > >will be lower .
> > >
> > > Oh, I am liking the way you are thinking.
Duty
> > cycle! Sylvan's post
> > > with a source and Gary (net.yogi.bear)
> > suggestion of the jell cell
> > > makes this sound like a real plan.
> > >
> > > > A current of 20 Amps is only required
during
> > power peaks . So ,with a
> > > >6-8 Amperes power supply unit set at 13.8 V
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> > combination with a reasonable
> > > >size Lead Acid battery ,you will be 'home
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> > dry'
> > > >
> > > >On the choice of battery , the best would
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> > deep cycle marine type .
> > > >However with the battery continously
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> > to the live power supply
> > > >unit a car battery would be quite
acceptable.
> > > >

> > > >Remains the choice of battery type from a
> > ventilation point of view . A
> > > >sealed or a no-maintenance battery can be
> > safely kept in the shack near
> > > >the radio . A battery which can be topped
up
> > with distilled /de-ionised
> > > >water should be installed in a well
ventilated
> > area. The capacity of the
> > > >battery depends on your operating habits eg
tx
> > duration /power /mode.
> > > >With a supposedly rx/tx duration ratio of
50
> > /50 it will be unlikely that
> > > >the average current drawn will exceed 8
> > Amperes.
> > > >
> > > >So my questimate is a 6 amperes power
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> > unit and a 25 - 40 Ah battery
> > > >wil be fine ,even for contesting .
> > > >
> > > >Note : Use a good quality power supply unit
> > with a clean 13.8 V - DC
> > > >output fitted with an internal diode such
that
> > when the AC power supply
> > > >fails , the battery will not drain via the
PSU
> > . When using an external
> > > >diode (to be rated for not less than twice
the
> > max PSU current and fitted to
> > > >a heat sink) the PSU output voltage
should be
> > set at 13.8 + 0.7 = 14.5
> > > >volts , 0.7 being the voltage drop across
the
> > diode.
> > >
> > > I'll check to see what a Sola power supply
runs.
> > Has to be a better
> > > bang for buck than buying a pricy OEM unit.
> > > >
> > > >Good luck
> > > >
> > > >Frank GM0CSZ / KN6WH

> > >
> > > 73, wes, kc8spr
> > > >
> > > >PS: When using a sealed battery ,some
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> > claim that the charging voltage
> > > >should not exceed 13.5 V .
> > > >However ,today I checked a commercial
battery
> > charger for batteries powering
> > > >electric golf carts ,which had its output
set
> > at 14.0 Volts.
> > > >
> > >
> > > --
> > > Reply to:
> > > Whiskey Echo Sierra Sierra AT Gee Tee EYE
EYE
> > dot COM
> > > Lycos address is a spam trap.
> >
> >
>
>

4310. Re: VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 01:36:45 UTC
From: "G.Beat" <abuse@comcast.com>
Message-ID: <N6sKa.17939$Bg.10800@rwcrnsc54>
Source record: 34662

Charles -

The Icom IC-12A was a beautiful 2-meter base station (and not cheap in the 1970s).
They did not make as many of the DV-21 (also pricy) - but they do appear.

The Icom IC-22A was the mobile version.

Many of the crystal controlled transceivers of that era use 12.000 MHz crystals
and then multiply by 12. A higher quality DDS solution may work for this function.

The receiver is tricky - because the IF frequency has to be calculated for.

Inquire at Radio Adventures
http://www.radioadv.com/ham_radio_equipment/FreqMC/BK178t180.htm

http://www.seboldt.net/k0jd/

http://www.qrpp-i.com/projects.htm

http://www.nitehawk.com/rasmit/dds50.html

http://ham.kiev.ua/pic/dds_ham2.html

AOR makes a nit for the Collins equipment
http://www.aoruk.com/direct/dds2a.htm

Greg
w9gb

--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

"Charles Cosby" <charlescosby@execulink.com> wrote in message
news:vfjvosn6ohv068@corp.supernews.com...
> Hello,
>
> I bought an Icom IC-12A and instead of buying crystals for it would like to
> get a VFO. Icom made one for it called a DV-21 but I cannot seem to find
> one for sale. Would it be possible to rig a different manufacturers VFO to
> work or are they rig specific?
>
> Thanks

> Charles
>
>

4311. Re: Sunday Morn Capacitor Quiz...

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 02:40:46 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bddmfe$e15$0@208.207.71.139>
Source record: 34663

Roy Lewallen wrote:

> Capacitance measuring
> capability is a fairly common "extra" on cheap DVMs, so it shouldn't be
> hard to find a similar one.

Browsing a Sears tool sale a few months ago, I stumbled onto a DVM deal that wasn't marked on sale,
but turned out to be the only thing I took home. It was a small, compact autoranging model with a
20pf-200mfd cap meter, 600vac/dc, 10amp ac/dc ranges, 10 megohm resistance, and a 10 hz to 10 mhz
frequency counter! It even measures temperature up to 1400 degrees with an optional probe, duty
cycle, has data hold, relative difference compared with a stored value. Has the rubber
impact-resistant case and a good set of leads with probes.All for $19.95.
I'm not sure if that was the usual price, but that's what it was marked and the price I paid. Made
in China, of course. The model number is 34-82139 in case anyone wants to go looking for one.

Dick

4312. Re: VHF/UHF antenna switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 02:42:41 UTC
From: Luis Rolo <luisrolo@netcabo.pt>
Message-ID: <3efa5d20$0$24021$a729d347@news.telepac.pt>
Source record: 34664

thank you for the precious help given.

I was able to buy a few used RF relays which specifications can be found at
http://www.dowkey.com/dk/products/164a.html , at a very reasonable price.
I think I have my problem solved. :))

73,

Luis Rolo, CT2INY

"artie" <silli_artie@hotmail.com> wrote in message
news:230620032211061627%silli_artie@hotmail.com...
> In article <3ef667d3$0$642$a729d347@news.telepac.pt>, Luis Rolo
> <luisrolo@netcabo.pt> wrote:
>
> > I am thinking about building a remote antenna switch mostly for 2m, 70
cm
> > and a discone (25Mhz-1.3Ghz) antennas. I suppose that common relays do
not
> > work at these frequencies, where can I find cheap RF relays for my
project?
> > Any clue? Max power level is 100W.
> > thanks in advance,
> >
> > Luis Rolo
> > CT2INY
> > OPO, PT
>
> eBay commonly has SMA relays, from companies such as Agilent (HP),
> Transco, dow-key, and others. These are typically good up to 8 GHz.
>
> New, these things cost hundreds of dollars. Used on eBay, $25 or so.
>
> Because of variations in how people name the things they're selling,
> look for "SMA" and narrow your search from there. They usually appear
> as SMA switches, SMA relays.
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2540905632&category=2
> 6211
>
> lists a dow-key SPDT latching relay. I also saw some SP6T switches.
>
> This auction is very useful for some of the comments it makes. These
> relays aren't meant for "hot switching" of RF power. The power limits
> depend on frequency -- 100 watts to 1 GHz, 50 watts to 4 GHz. If

> you're switching more than 35 watts at over 4 GHz, you're way out of my
> league!
>
> You can also pull down a series of reference documents and applications
> notes from Agilent website on RF relays.
>
> 73--
>
>
>
> >
> >

4313. Re: VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 02:47:54 UTC
From: "Dick Carroll;" <dixie@townsqr.com>
Message-ID: <bddmsqese0@208.207.71.139>
Source record: 34665

Ralph Mowery wrote:

> >
> > I bought an Icom IC-12A and instead of buying crystals for it would like
> to
> > get a VFO. Icom made one for it called a DV-21 but I cannot seem to find
> > one for sale. Would it be possible to rig a different manufacturers VFO
> to
> > work or are they rig specific?
> >
>
> I doubt any other external VFOs were made for the rigs.

Actually there was a VFO made for that 2meter rig, one of a very few models,
it was made in the time of transition from crystal controlled to internal VFO or
synthesizer frequency generation. In the IC21A you could either use crystals or
the outboard VFO, if you had one. It'll probably be hard to find now.

Dick

> There were some
> made by companies called GLB and VHF Engineering. You might be able to find
> one of those but that was over 25 years ago. I built one of the GLBs for an
> old Regency crystal controled rigs way back then. YOu might as well chunk
> the old rig and get a new one for about $ 150 .

4314. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 04:42:16 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <bddtj8gro1@sparta.btinternet.com>
Source record: 34666

Hi Wes,
<clutch@lycos.com> wrote in message
news:vfhjomji220fa6@corp.supernews.com...
> I just picked up a IC-706MK2G and with it being 95 degrees outside the
> thought of playing with it in the house rather than in the truck seems
> like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
> I could buy one but it would seem that this would be a good homebrew
> project.
>
> I would love to learn about shoestring homebrew solutions. Cheaper
> the better.
>
> 73, wes, kc8spr

One thing to remember when buying, or indeed home brewing a power supply is that if you develop a fault on the pass transistors is you will cause an high voltage to appear at the output terminals (this could be as high as 27 volts, or more in some cases) so it is always best to have built in, or build in protection against this happening.
Other things to consider regards protection are, under voltage protection, short circuit protection, current limiting (not always required) and soft start (helpful if using a toroid type transformer).
I would never consider building a cheap power supply without all the protection I could build into it, it's just not worth it when you consider the price of the equipment you have connected to it.

Hope this helps a little, cheers, Ken, G4KIR.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.491 / Virus Database: 290 - Release Date: 18/06/2003

4315. Re: Be SURE to oppose Broadbanded Crap Over Power Lines

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 05:38:23 UTC
From: robkemp90210@hotmail.com
Message-ID: <6114e4af.0306252138.778b5ceb@posting.google.com>
Source record: 34667
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Comments are due on or before July 7, 2003. The FCC now is accepting
electronically filed comments via its Electronic Comment Filing
System (ECFS).

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

In the "Proceeding" field, enter "03-104" and complete the required
fields. Comments may be typed into a form or you may attach a file
containing your comments.

Many good comments have been filed, one you may like to review is
here;
http://makeashorterlink.com/?C5C931A05

"Alan" <abs@hotmail.com> wrote in message
news:<e05ec31df3dd61a4d7c523044050e184@news.meganetnews.com>...
> 1. Limbaugh IS on XM - speak of what you know
> 2. Limbaugh ABHORS big government, so you're a little askew in
> trashing him. Clearly you 'know what you know but have never listened'
> If he had his way in the issue, the FCC would be abolished.
> 3. Get over it.
>
>
> "Shephed" <roll1up@smkey.com> wrote in message
> news:7ALJa.229917$VP.48434664@twister.neo.rr.com...
> >
> > "Bis Wichy" <wd0hco@ev1.net> wrote in message
> > news:BB1CB7BE.4496%wd0hco@ev1.net...
> > >
> > > >> Why bother? Unless you are a billionaire lining Powell's pockets, he
> is
> > > >> not going to listen.
> > > >>
> > > > Same reason for voting, if you don't vote, you got no chance and no
> > > > squawk no matter what happens. If you vote at least you got a chance.
> > > > NEVER GIVE UP!!!!!
> > >
> > > I love it! You guys don't see the FCC's plan do you?
> > >
> > > This stuff is so incredibly broad banded that it will also affect
> Standard
> > > AM Broadcast, shortwave as well as over the air TV Broadcasts.
> > >
> > > Ahhh, but if your rich, you can afford to buy a new Digital AM DAB

> receiver
> > > or XM Satellite receiver to listen to that dimwit Rush Limburger... and
> of
> > > course.....
> > >
> > > We ALL have to buy that Digital HDTV if you wanna watch TV over the air
> or
> > > keep your old NTSC TV and pay for a Satellite or cable TV hookup.
> > >
> > > Either way, you gonna have to spend money to keep what you got now!
> > >
> > > See the plan now ???
> > >
> > > No wonder Commissioner Powell jr is getting a big woody over this!
> > >
> > > This one technology alone will FORCE everyone to go digital. Like it or
> not.
> > >
> > > So just sit there, take it and don't say anything.
> > >
> > > It's what they are hoping for.
> > >
> > > - WDï¿½HCO -
> > >
> > Still sore about the 2000 election I see. :-)
> >
> >

4316. Re: Disable Speaker on Speaker Microphone for Handheld??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 08:03:04 UTC
From: Dwight Stewart <stewart@say.net>
Message-ID: <BB2020F8.1D720%stewart@say.net>
Source record: 34668
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

"Frank Dinger" wrote:
>
> I'll try to find the VX-7R circuit diagramme (somewhere,
> perhaps on the NET) and will come back to you. Pse give
> me a few days.

Thanks for the extra effort, Frank. If you find a schematic, please let me know where. I've searched and did not found one. I wasn't exactly thrilled when I discovered this radio didn't include a schematic - the first radio purchased from Yaesu without one.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

4317. Limbaugh on XM?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 09:16:50 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bdeh5q$48m$1@bob.news.rcn.net>
Source record: 34669
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

> "Alan" <abs@hotmail.com> wrote in message
news:<e05ec31df3dd61a4d7c523044050e184@news.meganetnews.com>...
> > 1. Limbaugh IS on XM - speak of what you know

Which channel is he on?

I haven't found mention of him on the XM web site. I've found the listings
for what seems to be the righty-talk channel and he's not in the schedule
contained therein.

I surfed for quite a while and found many, many messages saying that
Limbaugh is NOT on XM, and only one that said he is. No details were given.

4318. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 09:49:25 UTC
From: R J Carpenter <rcarpen@erols.com>
Message-ID: <bdej2u$7gj$1@bob.news.rcn.net>
Source record: 34671

"W3JDR" <joe@roccis.com> wrote in message
news:74AKa.2373$3b.415@nwrdny03.gnilink.net...
> Dick,
> Look at www.flex-radio.com.
>
> Gerald Youngblood has laid it all out including schematics,Visual Basic
> source code, and even a kit if you're so inclined. Very, very nice.
>
> BTW, the Intel libraries are still downloadable and free for amateur use.

I wonder why N4HY said otherwise. Good news in any case.

4319. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 10:40:03 UTC
From: W3JDR <joe@roccis.com>
Message-ID: <74AKa.2373$3b.415@nwrdny03.gnilink.net>
Source record: 34670

Dick,
Look at www.flex-radio.com.

Gerald Youngblood has laid it all out including schematics,Visual Basic source code, and even a kit if you're so inclined. Very, very nice.

BTW, the Intel libraries are still downloadable and free for amateur use.

Joe
W3JDR

"R J Carpenter" <rcarpen@erols.com> wrote in message news:bd73etglm1@bob.news.rcn.net...
>
> <c.a.m@antijunk3.blueyonder.co.uk> wrote in message
> news:733efvo8nr693ge17lh2dsvqostsrmb4c2@4ax.com...
> >
> > >> All you need is IQ out (just simple low pass filtered), and stuff that
> > >into the
> > >> stereo line in on a modern PC (96dB dynamic range), a bit of software,
> and
> > >you
> > >> have yourself a top notch any mode RX.
> > >
> > >As described in recent issues of QEX.
> >
> > oh right.
> >
> > Is the software freely available ?
>
> Yes and no.
>
> The s/w is written in Visual 'something' and requires a DSP library from
> Intel(?). The library was free when the article was written, but now costs
> money. N4HY was complaining about that in a letter to QEX - but 'HY is very
> skilled in such s/w and could/should write the necessary routines. Maybe he
> will, he has the demo hardware boards.
>
> Sorry, not a perfect world yet.
>

> 73 de bob w3otc
>
>

4320. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 11:17:51 UTC
From: c.a.m@antijunk3.blueyonder.co.uk
Message-ID: <hgllfvcin2u299vpqf2r8t0827d9gh1e5r@4ax.com>
Source record: 34672

>Look at www.flex-radio.com.
>
>Gerald Youngblood has laid it all out including schematics,Visual Basic
>source code, and even a kit if you're so inclined. Very, very nice.
>
>BTW, the Intel libraries are still downloadable and free for amateur use.

Nice unit.

The kits a bit on the pricey side but nice all the same.

Clive

4321. Re: "Pi-L net" vs "simple Pi + step-up"

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 12:30:53 UTC
From: PaoloC <fake.address@asdrubale.net>
Message-ID: <3efae07c$1@news.opennet.it>
Source record: 34673

"Harold E. Johnson" <W4ZCB@mchsi.com> ha scritto nel messaggio
news:YyhKa.14926$R73.2777@sccrnsc04...

> > My achievements so far: PA directly into 50 ohm gives some 10 mW RF on
my
> > meter (+25 mA @ 5V). But! PA with an attempt of Pi-L network, into the
50
> > ohm dummy load doesn't move the RF power meter, but draws +100 mA on key
> > down. Currents are relative to key-up consumption of about 46 mA (yes, I
> am
> > using a current-hungry design!). There must be some resonance in the
Pi-L
> > network...

> In the first case, you're measuring all power out. In the second,
> presumeably the power ~ 10 MHz. They are most likely, significantly

Good point! I haven't thought of that. Still, there is something weird in
the current consumption.

Without Pi-L the TX draws about 70 mA (final connected directly to 50 ohm
load through Power Meter). I am certainly measuring the total power at "all
frequencies".

With the Pi-L the TX draws about 160 mA, and there's no visible power
reading.

Besides the power reading reduction, there is a huge increase in the current
input... I have most probably built a resonating Pi-L :-))

> different. The primary difference between the Pi and the Pi-L from a
> operational standpoint is the improved harmonic reduction of the Pi-L. At

Interesting, thanks.

> Go to the WB6BLD website and download the free software named Match2. It

That's a good piece of software. I downloaded both of them and I will play
with filters in the next days.

Thanks for the hints. Hope to catch you on the air!
Paolo ZYW

4322. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 13:35:08 UTC
From: Dick <boleyd@yahoo.com>
Message-ID: <gECKa.6207$Hw.4807719@news2.news.adelphia.net>
Source record: 34674

I find that the mixer and detector to be more interesting than software to run the radio. I have tried many rig control programs and they do not give the "feel" of a mechanical dial. I have a large, almost instantaneous, dynamic control with a traditional dial versus mouse operations. ..

The dynamic range and selectivity of the radio (with a dial) are most important to me. The direct conversion quadrature detector seems to be the answer to those who do not want an Orion style price tag but do want the performance. If one is careful with the front-end bandswitching filters, preamps, and control circuits it seems that a very nice transceiver can be created at a very nice price.

Dick N3HKN

<c.a.m@antijunk3.blueyonder.co.uk> wrote in message
news:hgllfvcin2u299vpqf2r8t0827d9gh1e5r@4ax.com...
>
> >Look at www.flex-radio.com.
> >
> >Gerald Youngblood has laid it all out including schematics,Visual Basic
> >source code, and even a kit if you're so inclined. Very, very nice.
> >
> >BTW, the Intel libraries are still downloadable and free for amateur use.
>
> Nice unit.
>
> The kits a bit on the pricey side but nice all the same.
>
> Clive
>

4323. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 17:43:49 UTC
From: Sylvan Butler <Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnbfmc6l.de0.Znospam+noZs_0306@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 34675

On Wed, 25 Jun 2003 16:08:59 GMT, Gary S <Idontwantspam@net> wrote:
> You could buy just the gel cell, and set up the rest yourself. The
> power packs, similar to what AAA uses, are sold at good prices in many
> of the warehouse stores such as BJs Wholesale, CostCo, and Sam's Club.
> I like the versatility, and my old car had issues with running down
> the battery.

> I had even seen a setup where someone hardwired an amplifier brick
> onto the back of one of these, so he had a way to make his HT into a
> highly portable base station for emergency ops.

Ahh, good idea!

I have a small 500w inverter hardwired onto mine for portable power.
I could pick up a set of 75amp powerpole connectors...

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral busybodies. The robber baron's cruelty may sometimes sleep, his cupidity may at some point be satiated; but those who torment us for our own good will torment us without end, for they do so with the approval of their consciences. -- C. S. Lewis

4324. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 18:18:32 UTC
From: donut <none@none.com>
Message-ID: <Xns93A671BAC159Fdonut@216.102.43.227>
Source record: 34676

"Dick" <boleyd@yahoo.com> wrote in
news:gECKa.6207$Hw.4807719@news2.news.adelphia.net:

> I find that the mixer and detector to be more interesting than
> software to run the radio. I have tried many rig control programs and
> they do not give the "feel" of a mechanical dial. I have a large,
> almost instantaneous, dynamic control with a traditional dial versus
> mouse operations. ..

For me, there's no replacement for a large, detailed, warmly glowing
backlit dial. You can have a small LCD display for accurate tuning also.

4325. QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 21:07:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8bnmfvg2d1mhbcuvc9pligeouq2cbhcofc@4ax.com>
Source record: 34677
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Act before July 1st to preserve your privacy.

Hi All,

Subject: Your Credit: Personal Information goes public

Starting July 1st, 2003, the four major credit bureaus in the US
(Equifax,etc) will be allowed to release credit info, mailing
addresses, phone numbers, etc., to ANYONE who requests it. If you
do not want to be included in this release of your personal
information,

you can call 1-888-567-8688.

Once the message starts
you will want option #2 - wait for the long silence to offer it!!!!!
(even though option #1 refers to this email, push #2)

Be sure to listen closely, the first option is only for a two-year
period.

Make sure you wait until they prompt for the option which opts you out
FOREVER.

PRACTICE this call at least once to hear the whole ball of wax
through. The message menuing is designed to obscure your options and
to muddy the water in their favor. It is heavily designed so that you
take the first less protective path (note, they approach this with
your ignorance giving them everything). Nothing will happen until you
are prompted to speak your name, and punch in your street address to
put the gears into place. PRACTICE this call to that point until you
are satisfied.

You should receive their paperwork in the mail confirming the "opting
out" in less than one week after making the call.

Then write your congresspeople and thank them for entitling these
agencies to stream your private information to ANYONE (not just
creditors).

73's
Richard Clark, KB7QHC

4326. Re: VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 22:33:36 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <t5SdnbIxCJyM6GajXTWJjw@ctc.net>
Source record: 34678

"Dick Carroll;" <dixie@townsqr.com> wrote in message
news:bddmsqese0@208.207.71.139...
>
>
> Ralph Mowery wrote:
>
> > >
> > > I bought an Icom IC-12A and instead of buying crystals for it would
like
> > to
> > > get a VFO. Icom made one for it called a DV-21 but I cannot seem to
find
> > > one for sale. Would it be possible to rig a different manufacturers
VFO
> > to
> > > work or are they rig specific?
> > >
> >
> > I doubt any other external VFOs were made for the rigs.
>
> Actually there was a VFO made for that 2meter rig, one of a very few
models,
> it was made in the time of transition from crystal controlled to internal
VFO or
> synthesizer frequency generation. In the IC21A you could either use
crystals or
> the outboard VFO, if you had one. It'll probably be hard to find now.

I know they made a VFO for that rig. I ment there were not factory VFO's
made for any of the other rigs but a few of the Icoms. I saw that VFO about
20 years ago. Think it only covered 146 to 148 MHZ also (US version). I
was not sure if the origional request was for an Icom 12 or 21 and the 12
being a type. I did not remember an Icom 12 but it could have been a year
or 2 before my time.

I built a GLB unit for a rig of mine and installed a VHF Engineering VFO for
a ham in the local area about 25 years or more ago.

4327. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 22:40:31 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <NIqcnQcl99At62ajU-KYvA@ctc.net>
Source record: 34679

"K..
> >
> > I would love to learn about shoestring homebrew solutions. Cheaper
> > the better.
> >
> > 73, wes, kc8spr
>
> One thing to remember when buying, or indeed home brewing a power supply
is
> that if you develop a fault on the pass transistors is you will cause an
> high voltage to appear at the output terminals (this could be as high as
27
> volts, or more in some cases) so it is always best to have built in, or
> build in protection against this happening.
> Other things to consider regards protection are, under voltage protection,
> short circuit protection, current limiting (not always required) and
soft
> start (helpful if using a toroid type transformer).
> I would never consider building a cheap power supply without all the
> protection I could build into it, it's just not worth it when you consider
> the price of the equipment you have connected to it.

While a proper homebrew supply is fine, it is hard to justify trying to save
a few bucks on a power supply and frying a $ 700 or more rig.
But that is the way may hams are. People are that way in many things.
Reminds me of an old uncle of mine. He bought a new tire for an old tractor
. Said he did not need a new intertube for it as the old one held air after
putting on the 8 th patch.

4328. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-26 23:02:23 UTC
From: Phil Stripling <phil_stripling@cieux.zzn.com>
Message-ID: <3qr85gtpc0.fsf@shell4.tdl.com>
Source record: 34680
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Richard wrote, in error:
> Act before July 1st to preserve your privacy.
>SNIP<

Hi, Richard. Please make snopes.com a regular part of your reading day. Here's a particular URL:
http://www.snopes.com/inboxer/pending/credit.htm
with a particular quote:
Claim: The four major U.S. credit bureaus will be allowed to share your private information with anyone who requests it as of 1 July 2003 unless you specifically request them not to.

Status: False.

Example: [Collected on the Internet, 2001]

Just wanted to let everyone know who hasn't already heard, the four major credit bureaus in the US. will be allowed, starting July 1, to release your credit info, mailing addresses, phone numbers etc. to anyone who requests it. If you would like to 'opt out' of this release of info, you can call 1-888-567-8688. It only takes a couple of minutes to do, and you can take care of anyone else in the household while making only one call, you'll just need to know their social security number. Be sure to listen closely, the first opt out is only for two years, make sure you wait until they prompt you to press '3' on your keypad to opt out for good.

Origins:
...
However, it is not true that consumers must call this number before 1 July 2003, nor is it true that recent legislation allows credit bureaus to share private information with "anyone who requests it." This misinformation has been circulating since 2001, and the same message keeps getting get dusted off and sent around every year with an updated deadline. (In fact, if you call the number listed above, the first option you're presented is to listen to a message explaining why the e-mail quoted above is false.)

The entire page explains what the problem is and how the hoax keeps getting sent around. By the way, have you sent your business card to that poor boy in England who wants to have the biggest collection before he dies of a brain tumor? :-)
--
Philip Stripling | email to the replyto address is presumed
Legal Assistance on the Web | spam and read later. email to philip@

http://www.PhilipStripling.com/ | civex.com is read daily.

4329. Help with Roland DXY 1200 Plotter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 00:03:01 UTC
From: Martins <martins@dodo.com.au>
Message-ID: <3efb89b1@news.comindico.com.au>
Source record: 34681

Hi
Can you help me out with some info

I have picked up a Roland DXY 1200 Plotter with no cables

The power in is on the side of plotter it has 3 pins marked 9.7v/31v dc
(like the back of a computer supply only smaller)
Is this the working voltage range or supply to each pin and a ground ?

I have not been able to find a manual for notes for it.

I hope to plot PCB with it

Thanks For your time

Regards
Craig vk2zcm

4330. Re: Huge group for transmitter and radio freaks

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 00:44:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3efb8918.15005385@news.online.no>
Source record: 34682

On Fri, 18 Apr 2003 07:45:08 -0700, Dr. Anton Squeegee
<SpammersAreVermin@dev.nul> wrote:

>In article <b7o7ov$3sf$1@hermes.castel.nl>, alinter@alwaysaccess.nl
>says...
>
>> Huge group for transmitter and radio freaks

>> http://groups.yahoo.com/group/The_Radio_and_Transmitter_Electronics
<snip again>
>
> FWIW: You may want to find a different list host. A lot of sites,
>mine included, block all traffic from Yahoo Groups because Yahoo's
>response to spam from same is lacking at best. As I recall, chunks of
>Yahoo's IP space are also listed in the SPEWS database, which means any
>ISP that uses SPEWS will not receive traffic from any listed Yahoo site.
>
> Good luck.
>
>
and an important site to learn how proper power amplifiers works is
http://www.ifwtech.co.uk/g3sek

73
Jan-Martin
LA8AK
http://home.online.no/~la8ak/
Non-commercial Radio commnunication

4331. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 02:24:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kp9nfv4sib2acrv8rmjsotfcdjav582sgu@4ax.com>
Source record: 34683
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On 26 Jun 2003 16:02:23 -0700, Phil Stripling
<phil_stripling@cieux.zzn.com> wrote:

> (In fact, if you call the number listed above, the first
> option you're presented is to listen to a message explaining why the
> e-mail quoted above is false.)

This fact is NOT a fact at all.

There is NO explanation at all. the FIRST option is, just I
described, an offer to allow you to withdraw for 2 years.

The SECOND option comes after some great length of dead air, long
enough to give every appearance of the first being the ONLY option.
The operator (a mechanical voice actually) zips through this quickly
to then offer:

The THIRD option is for you to RESCIND your opt-out, or to SIGN UP for
this benefit! It comes expressed in language tailored for your choice
over the quick skim of the second option.

It is quite obvious that if one were to follow the instructions, now
perpetuated by you, at the page you offer without regard to what was
being said, the individual would be blowing off their privacy. HENCE
my caution about LISTENing closely and doing it more than once!

Industry shills are working overtime, and I can see the makings of an
Option Roulette being played to good advantage - even here.

forgive me for the lack of a warm closing, you don't seem to have a
call, and you certainly don't have the facts nor the experience.

4332. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 04:47:28 UTC
From: Phil Stripling <phil_stripling@cieux.zzn.com>
Message-ID: <3qhe6c5dpb.fsf@shell4.tdl.com>
Source record: 34684
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Richard Clark <kb7qhc@attbi.com> writes:

> On 26 Jun 2003 16:02:23 -0700, Phil Stripling
> <phil_stripling@cieux.zzn.com> wrote:
>
> > (In fact, if you call the number listed above, the first
> > option you're presented is to listen to a message explaining why the
> > e-mail quoted above is false.)
>
> This fact is NOT a fact at all.

That's a quote from snopes.com, your friend.

>SNIP<
> forgive me for the lack of a warm closing, you don't seem to have a
> call, and you certainly don't have the facts nor the experience.

No problem for me, Dick. The fact remains, it's a long time hoax and totally wrong. And you've passed it on. So what about the poor kid with the brain tumor? Have you sent in your business card yet?

Your pal,
Phil

--
Philip Stripling | email to the replyto address is presumed
Legal Assistance on the Web | spam and read later. email to philip@
http://www.PhilipStripling.com/ | civex.com is read daily.

4333. Re: VFO for Crystal Controlled Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 10:13:20 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3efc18fb$0$22126@echo-01.iinet.net.au>
Source record: 34685

If you know the freqs required you might consider using our board at

http://www.qsl.net/ke5fx/synth.html

It has not been tried at 144 MHz (+/- offsets) but there is no reason why it
should not work with the relevant Minicircuits VCO and the PLL chip which
should be pin compatible with the board.
I would be interested in the outcome.

Richard Hosking

Ralph Mowery <rmowery@ctc.net> wrote in message
news:t5SdnbIxCJyM6GajXTWJjw@ctc.net...
>
> "Dick Carroll;" <dixie@townsqr.com> wrote in message
> news:bddmsqese0@208.207.71.139...
> >
> >
> > Ralph Mowery wrote:
> >
> > > >
> > > > I bought an Icom IC-12A and instead of buying crystals for it would
> like
> > > to
> > > > get a VFO. Icom made one for it called a DV-21 but I cannot seem to
> find
> > > > one for sale. Would it be possible to rig a different manufacturers
> VFO
> > > to
> > > > work or are they rig specific?
> > > >
> > >
> > > I doubt any other external VFOs were made for the rigs.
> >
> > Actually there was a VFO made for that 2meter rig, one of a very few
> models,
> > it was made in the time of transition from crystal controlled to
internal
> VFO or
> > synthesizer frequency generation. In the IC21A you could either use
> crystals or
> > the outboard VFO, if you had one. It'll probably be hard to find now.
>
>
> I know they made a VFO for that rig. I ment there were not factory VFO's

> made for any of the other rigs but a few of the Icoms. I saw that VFO
about
> 20 years ago. Think it only covered 146 to 148 MHZ also (US version).
I
> was not sure if the origional request was for an Icom 12 or 21 and the 12
> being a type. I did not remember an Icom 12 but it could have been a year
> or 2 before my time.
>
> I built a GLB unit for a rig of mine and installed a VHF Engineering VFO
for
> a ham in the local area about 25 years or more ago.
>
>
>

4334. Re: Help with Roland DXY 1200 Plotter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 10:57:48 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000003d.006f73a6@btinternet.com>
Source record: 34686

Hi,

The label on my power supply for the DXY1200 plotter states 9.1V and 31V DC at 700mA. The centre pin (top of triangle) is ground with the lower 9.1V supply going to the left-hand pin as you look at the plotter with the bed upwards. I measured the off-load voltages from my PSU and they were 14V and 40V respectively which suggests they are both unregulated.

As a result of your posting, I dragged my plotter out of the box where it has lain for 4 years and will have a go plotting PCBs in the near future. I have always used someone else to do the hard work but as I'm retired I'll have to get down to it myself. If you wish to swop notes, please email me.

Incidently, it will not be obvious until you switch it on but the DXY 1200 uses electrostatic paper hold-down - quite a dust trap.

Cheers - Joe, G3LLV

4335. FA: MVT9000 NO GAPS!

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 11:24:28 UTC
From: Digitalebola <administrator@digitalsignals.org.NOSPAM>
Message-ID: <3efc2967$1@dnews.tpgi.com.au>
Source record: 34687

http://cgi.ebay.com.au/ws/eBayISAPI.dll?ViewItem&item=3032763192

4336. Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 12:18:20 UTC
From: dombaines@yahoo.com
Message-ID: <205f56a7.0306270418.63f74152@posting.google.com>
Source record: 34688

I'm looking for some large value variable caps... ATU project.

1/4" shaft.
one twin gang (could be 3 or 4 gang actually) each section 500pF (each
section 250pF if 4 gang)
one independant 500pF

or 3 500pF independant.

smaller physically the better.

1000pF cap's might be interesting to hear about for a 160m ATU.

I've tried ebay with some success with lower value but nothing
reasonable otherwise. Can anyone suggest a supplier (that doesn't
charge the earth) and will ship to UK or is in UK?

73's

Dominic
M3KTA

4337. Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 12:59:03 UTC
From: shoppa@trailing-edge.com
Message-ID: <bec993c8.0306270459.321c845a@posting.google.com>
Source record: 34689
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I a newbie to 1.5 GHz-range SMD PCB layout, so bear with me:

I'm working with 1/16th double-sided FR4. Bottom side is solid ground plane. I've got plenty of PCB area to work with. Parts are SOT-363 (MMIC), SOT-343 (GaAsFET), and 0603 discretes. (I can barely solder these by hand, any suggestions about using parts smaller than these grain of sand things will be laughed at.) No through-hole parts.

My circuit works, but now that I compare my design with commercial designs I have some questions.

Question 1: What's the best way to get a low-inductance vias to the ground plane? Lots of small-diameter vias, or fewer large-diameter vias? Or is it a non-issue? Does using wire vias as opposed to plated-through vias help or hurt? (Obviously in a mass-production design you don't want wire vias, but this is a hobbyist one-off).

Question 2: Would the answer to the above question change if I used 1/32nd FR4 instead? Obviously the 50-ohm microstrip sections would require less width, but I'm generally not lacking in board area. I'm thinking that vias in 1/32nd board must have less inductance than 1/16th board, but I lack a feel for the magnitude of difference. 0.3nH vs 0.6nH, maybe?

Question 3: Does it make any sense to put ground planes on the top side of the PCB in otherwise unused areas? (Assume lots of vias to the other side). I'm thinking about bypass capacitors for a GaAsFET source connection or MMIC power bypass. In particular I'm comparing NEC GaAsFET evaluation board
design (where the top has ground planes in otherwise unused areas and the bypass capacitors go to planes) with the HP evaluation board designs (where they use a small upper ground "strip" connected with extremely dense vias to the other side).

I'm just a hobbyist looking for some advice...

Tim.

4338. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 13:09:21 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3efc41f3$0$48891$edfadb0f@dtext02.news.tele.dk>
Source record: 34690

Hello Dominic

> I've tried ebay with some success with lower value but nothing
> reasonable otherwise. Can anyone suggest a supplier (that doesn't
> charge the earth) and will ship to UK or is in UK?

http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm#catalogue

Regards Max

4339. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 13:46:26 UTC
From: Bernhard Rhondin <bernhard_rhondin@hotmail.com>
Message-ID: <3EFC4AB2.D76A90AD@hotmail.com>
Source record: 34691

They deliver to Sweden, so UK should not be a problem...

http://www.rfparts.com/caps4.html

(there used to be a German manufacturer/supplier, but they closed
down some 3-4 years ago. There might be 2:nd hand caps in
Germany, though...

BR.

Dominic Bines wrote:

> I'm looking for some large value variable caps... ATU project.
>
> 1/4" shaft.
> one twin gang (could be 3 or 4 gang actually) each section 500pF (each
> section 250pF if 4 gang)
> one independant 500pF
>
> or 3 500pF independant.
>
> smaller physically the better.
>
> 1000pF cap's might be interesting to hear about for a 160m ATU.
>
> I've tried ebay with some success with lower value but nothing
> reasonable otherwise. Can anyone suggest a supplier (that doesn't
> charge the earth) and will ship to UK or is in UK?
>
> 73's
>
> Dominic
> M3KTA

4340. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 14:08:51 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <TdYKa.33293$3d.19349@sccrnsc02>
Source record: 34692
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

> Question 3: Does it make any sense to put ground planes on the top side
of the
> PCB in otherwise unused areas? (Assume lots of vias to the other
> side). I'm thinking about bypass capacitors for a GaAsFET source
> connection or MMIC power bypass. In particular I'm comparing NEC
> GaAsFET evaluation board
> design (where the top has ground planes in otherwise unused areas
> and the bypass capacitors go to planes) with the HP evaluation board
designs
> (where they use a small upper ground "strip" connected with extremely
dense
> vias to the other side).
>
> I'm just a hobbyist looking for some advice...
>
> Tim.

GM Tim. The answer to the above is certainly! (Unused areas as ground planes.) HP, in their advice for SHF MMIC's is to use 0.010 double sided in that the significant inductance of vias thru thicker material is a source of instability at those frequencies. (Data sheet for the INA 02186 I believe) In addition to LOTS of vias between upper and lower ground planes to parallel the inductances, try copper tape (Stained glass stores) completely around the edges. Except of course, the gazintas and gazoutas. Then, connect the coax fittings to both sides of the board.

W4ZCB

4341. LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 14:12:08 UTC
From: Pawe? Stobin'ski <sq9nry@wp.pl>
Message-ID: <bdhjbr$l75$1@julia.coi.pw.edu.pl>
Source record: 34694

I'm about to construct a LF filter, with cut-off frequency about 2-3kHz.
I considered 8th order, by Butterwoth or Chebyshev approximation.
Butterwoth looks quite well - flat passband; but Chebyshev filter has an
improved roll-off rate. Nevertheless, the flatness is not ideal - up to
3dB up and down in passband. Does it affect the sound quality much? Is
it worth to obtain rough band instead of flatness?
Thanks for any info!

--
Pawe? Stobin'ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

4342. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 14:15:07 UTC
From: John Larkin <jjlarkin@highlandSNIPtechTHISnologyPLEASE.com>
Message-ID: <ovjofvsqdpgld4ao6jbagnlm3in96cvfov@4ax.com>
Source record: 34693
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 27 Jun 2003 05:59:03 -0700, shoppa@trailing-edge.com (Tim Shoppa)
wrote:

>I a newbie to 1.5 GHz-range SMD PCB layout, so bear with me:
>
>I'm working with 1/16th double-sided FR4. Bottom side is solid ground
>plane. I've got plenty of PCB area to work with. Parts are SOT-363 (MMIC),
>SOT-343 (GaAsFET), and 0603 discretes. (I can barely solder these by hand,
>any suggestions about using parts smaller than these grain of sand things
>will be laughed at.) No through-hole parts.
>

0603's are huge. Try some 0402 or 0201 things and you'll be grateful
for 0603's.

>My circuit works, but now that I compare my design with commercial designs
>I have some questions.
>
>Question 1: What's the best way to get a low-inductance vias to the
>ground plane? Lots of small-diameter vias, or fewer large-diameter vias?
>Or is it a non-issue? Does using wire vias as opposed to plated-through
>vias help or hurt? (Obviously in a mass-production design you don't want
>wire vias, but this is a hobbyist one-off).

If you need a serious topside ground, the best way is to make a
topside copper island, as big as you can, and "rivet" it to the bottom
(or inner) ground plane woth lots of vias. Big vias if possible. This
is often done as a bowtie shape under an IC, to get good grounding.

Bigger vias are better than smaller. Don't use thermals.

>
>Question 2: Would the answer to the above question change if I used 1/32nd
>FR4 instead? Obviously the 50-ohm microstrip sections would require less
>width, but I'm generally not lacking in board area. I'm thinking that vias
>in 1/32nd board must have less inductance than 1/16th board, but I lack
>a feel for the magnitude of difference. 0.3nH vs 0.6nH, maybe?

Yes, lower L on thinner boards. 50 ohm traces are generally more lossy
on thin boards, but that's not usually an issue on small boards with
short traces.

>
>Question 3: Does it make any sense to put ground planes on the top side of the
>PCB in otherwise unused areas? (Assume lots of vias to the other
>side). I'm thinking about bypass capacitors for a GaAsFET source

>connection or MMIC power bypass. In particular I'm comparing NEC
>GaAsFET evaluation board
>design (where the top has ground planes in otherwise unused areas
>and the bypass capacitors go to planes) with the HP evaluation board designs
>(where they use a small upper ground "strip" connected with extremely dense
>vias to the other side).

If the top islands are useful (see above), yes. Just taking up space,
not doing real work, they probably don't matter.

John

4343. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 14:31:50 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <bdhkgl$c3v$1@sparta.btinternet.com>
Source record: 34695

You forgot the RF voltage rating. Don't end up with those things in pocket transistors.

4344. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 15:33:42 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <qtZKa.31843$R73.5471@sccrnsc04>
Source record: 34696

> I'm about to construct a LF filter, with cut-off frequency about 2-3kHz.
> I considered 8th order, by Butterwoth or Chebyshev approximation.
> Butterwoth looks quite well - flat passband; but Chebyshev filter has an
> improved roll-off rate. Nevertheless, the flatness is not ideal - up to
> 3dB up and down in passband. Does it affect the sound quality much? Is
> it worth to obtain rough band instead of flatness?
> Thanks for any info!
>
> --
> Pawe? Stobin'ski, SQ9NRY
> Warsaw University of Technology
> Institute of Computer Science
>
If you're getting that kind of ripple, you've got the impedance way off.
Specify the termination Z and I'll give you a Tchebychev with essentially no
ripple.

W4ZCB

4345. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 16:08:59 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <bdhq6u$rh3$1@julia.coi.pw.edu.pl>
Source record: 34497

Harold E. Johnson wrote:
> If you're getting that kind of ripple, you've got the impedance way off.
> Specify the termination Z and I'll give you a Tchebychev with essentially no
> ripple.
>
> W4ZCB

I made the simulation of some filters crafted by different
approximations, and I noticed some ripple in Tchebychev, but they were
not matched. Now I cannot determine exact impedance yet, this filter is
going to be inserted after detector I think, or after another LF
pre-amplifier. What about employing an impedance repeater on single
op.amp? I could connect it anywhere and the filter will always notice
high impedance, or such impedance as I provide with simple 2-resistor
divider. Is this correct?

--
Paweďż˝ Stobiďż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

4346. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 17:31:55 UTC
From: SFM <k9po@amsat.org>
Message-ID: <bdhv4j$96m$1@newshost.mot.com>
Source record: 34508
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Here Richard will this help you to understand??

CREDIT REPORTING INDUSTRY ONCE AGAIN WARNS CONSUMERS ABOUT FALSE E-MAIL

Atlanta, April 16, 2003 Consumers are once again being advised by the credit reporting industry to be wary of a false e-mail circulating the Internet regarding the information handling practices of consumer credit reporting companies.

The false e-mail reads:

"Just wanted to let everyone know who hasn't already heard, the four major credit bureaus in the U.S. will be allowed, starting July 1, to release your credit info, mailing addresses, phone numbers... to anyone who requests it. If you would like to "opt out" of this release of info., you can call 1-888-567-8688. It only takes a couple of minutes to do, and you can take care of anyone else in the household while making only one call, you'll just need their social security number."

Contrary to claims made in the e-mail, credit-reporting companies do not provide personal consumer data to "anyone who requests it." Federal law prohibits such a practice. Consumer credit reports are only provided to legitimate businesses that have a permissible purpose under the law. Such permissible purposes typically involve the extension of credit, insurance, employment, or government benefit.

The toll-free number included in the e-mail is valid only for consumers who want to remove their names from mailing lists for pre-approved offers of credit lawfully generated by the major credit reporting companies. That opt-out number has been in effect and available to consumers since 1997.

The Consumer Data Industry Association issued three previous news releases noting the e-mail was false and misleading. Consumers can access the original release sent out in July of 2001 by clicking on "Media Room" at www.cdiaonline.org. The Federal Trade Commission (FTC) also issued a consumer alert in 2001 when this message first circulated to advise consumers.

--Source: Consumer Data Industry Association, April 9, 2003

And here is the link from where this info came from
http://www.equifax.com/corp/pressroom/pressreleases/2003/2003_04_16.shtml

Good luck too on getting all that money from Nigerian nephew of the former President that only required your bank acount number.

Scott
--

Scott F. Migaldi, K9PO
IDCS-150972
PP-ASEL
**"A long time ago being crazy meant something, nowadays everyone is
crazy" -- Charles Manson**

"Phil Stripling" <phil_stripling@cieux.zzn.com> wrote in message
news:3qhe6c5dpb.fsf@shell4.tdl.com...
> Richard Clark <kb7qhc@attbi.com> writes:
>
> > On 26 Jun 2003 16:02:23 -0700, Phil Stripling
> > <phil_stripling@cieux.zzn.com> wrote:
> >
> > > (In fact, if you call the number listed above, the first
> > > option you're presented is to listen to a message explaining why the
> > > e-mail quoted above is false.)
> >
> > This fact is NOT a fact at all.
>
> That's a quote from snopes.com, your friend.
>
> >SNIP<
> > forgive me for the lack of a warm closing, you don't seem to have a
> > call, and you certainly don't have the facts nor the experience.
>
> No problem for me, Dick. The fact remains, it's a long time hoax and
> totally wrong. And you've passed it on. So what about the poor kid with
the
> brain tumor? Have you sent in your business card yet?
>
> Your pal,
> Phil
>
> --
> Philip Stripling | email to the replyto address is presumed
> Legal Assistance on the Web | spam and read later. email to philip@
> http://www.PhilipStripling.com/ | civex.com is read daily.

4347. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 17:32:47 UTC
From: SFM <k9po@amsat.org>
Message-ID: <bdhv66$96o$1@newshost.mot.com>
Source record: 34507
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:kp9nfv4sib2acrv8rmjsotfcdjav582sgu@4ax.com...
> On 26 Jun 2003 16:02:23 -0700, Phil Stripling
> <phil_stripling@cieux.zzn.com> wrote:
>
> > (In fact, if you call the number listed above, the first
> > option you're presented is to listen to a message explaining why the
> > e-mail quoted above is false.)
>
> This fact is NOT a fact at all.
>
> There is NO explanation at all. the FIRST option is, just I
> described, an offer to allow you to withdraw for 2 years.

It is to withdraw from snail mail offers!!!

4348. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 17:34:31 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <He%Ka.34359$Ab2.60577@sccrnsc01>
Source record: 34498

> I made the simulation of some filters crafted by different
> approximations, and I noticed some ripple in Tchebychev, but they were
> not matched. Now I cannot determine exact impedance yet, this filter is
> going to be inserted after detector I think, or after another LF
> pre-amplifier. What about employing an impedance repeater on single
> op.amp? I could connect it anywhere and the filter will always notice
> high impedance, or such impedance as I provide with simple 2-resistor
> divider. Is this correct?

An op-amp will exhibit low impedance at it's output and you should be safe specifying it as 100 ohms or less and even terminating it in a known resistance around that value. You need to decide what the output impedance will be. You can resistively load a filter with a terminating impedance if it's going to feed a very high impedance, or specify what the impedances are to be, but they will determine the component values.

W4ZCB

4349. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 18:40:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f22pfvs4lubv6pvu4abgflkefjbrdmffmb@4ax.com>
Source record: 34499
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On 26 Jun 2003 21:47:28 -0700, Phil Stripling
<phil_stripling@cieux.zzn.com> wrote:

>Richard Clark <kb7qhc@attbi.com> writes:
>
>> On 26 Jun 2003 16:02:23 -0700, Phil Stripling
>> <phil_stripling@cieux.zzn.com> wrote:
>>
>> > (In fact, if you call the number listed above, the first
>> > option you're presented is to listen to a message explaining why the
>> > e-mail quoted above is false.)
>>
>> This fact is NOT a fact at all.
>
>That's a quote from snopes.com, your friend.

I saw your law reference library, bucko. A website devoted to "Urban
Myths" - impressive stuff to base your practice against.

I see the quality of your "Legal Assistance on the Web" and note you
have actually done nothing but bait the trap to snare the unwary, ripe
for unscrupulous Credit Bureau practices.

4350. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 18:49:58 UTC
From: kludge@panix.com
Message-ID: <bdi3kmjlj1@panix2.panix.com>
Source record: 34500
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Richard Clark <kb7qhc@attbi.com> wrote:
>
>I saw your law reference library, bucko. A website devoted to "Urban
>Myths" - impressive stuff to base your practice against.

In actuality, your credit records pretty much _are_ available to everyone. It might be illegal to look them up or to use them, but it happens all the time, to the point where one company I can think of does a credit check on potential employees. Just because it's illegal doesn't mean that it does not happen regularly.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

4351. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 19:06:09 UTC
From: donut <none@none.com>
Message-ID: <Xns93A779CBD86F9donut@216.102.43.227>
Source record: 34501

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in
news:bdhkgl$c3v$1@sparta.btinternet.com:

> You forgot the RF voltage rating. Don't end up with those things in
> pocket transistors.
>
>
>

Antique Radio Supply did have some very nice 3 gang units for very little -
maybe $4 each. But that was some time ago.

4352. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 19:42:48 UTC
From: Phil Stripling <phil_stripling@cieux.zzn.com>
Message-ID: <3qy8znfgsn.fsf@shell4.tdl.com>
Source record: 34502
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

Richard Clark <kb7qhc@attbi.com> writes:

> I saw your law reference library, bucko. A website devoted to "Urban
> Myths" - impressive stuff to base your practice against.
>
> I see the quality of your "Legal Assistance on the Web" and note you
> have actually done nothing but bait the trap to snare the unwary, ripe
> for unscrupulous Credit Bureau practices.

:-> Whoa, Dick! You are on a _rant_!

The URL again is http://www.snopes.com/inboxer/pending/credit.htm
and I have nothing to do with snopes.com -- it's an excellent resource for reading about hoaxes such as the false claim that credit bureaus can sell all our private information unless we opt out. In fact, the Fair Credit Reporting Act of 1997 contains limitations on who may request the information and for what purposes. The link I provide to snopes.com explains it all in plain English for those not so angry they've lost the ability to read.

And while you're (well, not you, Dick, but the other readers) at snopes.com, browse around and read about the online myths that a tooth left in Coke will dissolve overnight, the _true_ story of a medical student who discovers that an anatomy class cadaver is the body of his relative, the unfortunate hoaxes about children sick with cancer who will receive money/accolades/fame for every business card/email/birthday card/whatever that is sent to someone who is now being buried by unwanted mail or email. And be sure to search snopes.com for ManBeef. Or maybe not.

I also invite one and all to drop by my Website at
http://www.PhilipStripling.com/
and see if I've baited the trap for the unwary. :-> I'm sorry to tell you (well, not you, Dick, but you know that already) that it's not nearly as entertaining as snopes.com, but who knows you (er...) might find something interesting or educational.

Buh-bye, Dick. I'm sorry you're so freaked out over being led astray by the email hoax. You're not alone, though.

73, Dick!
Your pal,
Phil
--
Philip Stripling | email to the replyto address is presumed

Legal Assistance on the Web | spam and read later. email to philip@
http://www.PhilipStripling.com/ | civex.com is read daily.

4353. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 19:46:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2c7pfv8ehjhio4s9u0paigtiv10kqbtbt8@4ax.com>
Source record: 34503
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On 27 Jun 2003 14:49:58 -0400, kludge@panix.com (Scott Dorsey) wrote:

>Richard Clark <kb7qhc@attbi.com> wrote:
>>
>>I saw your law reference library, bucko. A website devoted to "Urban
>>Myths" - impressive stuff to base your practice against.
>
>In actuality, your credit records pretty much _are_ available to everyone.
>It might be illegal to look them up or to use them, but it happens all the
>time, to the point where one company I can think of does a credit check on
>potential employees. Just because it's illegal doesn't mean that it does
>not happen regularly.
>--scott

Hi Scott,

Reptilian Lawyers find ways to both scout out the loopholes and to
perpetuate myths couched in the expression of "serving the public."
The links I supplied to Bob:

varying by degrees of depth of discussion are the following sources of
CURRENT and historical discussion:
http://www.privacyrights.org/
http://www.consumer-action.org/
http://www.epic.org/
and especially
http://www.pirg.org/consumer/privacy/glb.htm

list a number of deceptions practiced that lead to legislation
relating to this act of congress (remember to thank your
representatives).

73's
Richard Clark, KB7QHC

4354. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 19:49:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <et7pfvk7or3c4j5jfvo3buvo5jp7me71g7@4ax.com>
Source record: 34504
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On 27 Jun 2003 12:42:48 -0700, Phil Stripling
<phil_stripling@cieux.zzn.com> wrote:

>Buh-bye, Dick. I'm sorry you're so freaked out over being led astray by the
>email hoax. You're not alone, though.
>
>73, Dick!
>Your pal,
>Phil

Write when you find work.

4355. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 20:57:50 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <bdib4g$3as$1@julia.coi.pw.edu.pl>
Source record: 34505

Harold E. Johnson wrote:

> An op-amp will exhibit low impedance at it's output and you should be safe
> specifying it as 100 ohms or less and even terminating it in a known
> resistance around that value. You need to decide what the output impedance
> will be. You can resistively load a filter with a terminating impedance if
> it's going to feed a very high impedance, or specify what the impedances are
> to be, but they will determine the component values.
>
> W4ZCB

So, I guess, having a filter I must evaluate the characteristic
impedance of the filter, to match it properly. But I've not found any
formulas including characteristic Z, I could only choose either constant
capacitances or resistances, and having a given frequency I could
compute R's and C's. If you'd direct me where I might find formulas
including Z(char.) I would be very graceful, or how to read out the
Z(char.) from the values of R's and C's of the filter.

--
Paweďż˝ Stobiďż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

4356. Source of SWR Panel Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 21:12:26 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <%q2La.730$sh4.79519@newsfep2-win.server.ntli.net>
Source record: 34506

Does anyone know a reliable source of small panel mountable milliammeters
(100uA - 500uA) which are ready marked with a SWR scale?
I shall be requiring a quantity of these.
Any assistance will be greatly appreciated.

Duncan G4DFV

4357. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 21:55:29 UTC
From: clutch@lycos.com
Message-ID: <vfpfbh8cpr3ocb@corp.supernews.com>
Source record: 34509

The last time I tried this they totally screwed up my name which of course made the opt out useless. Anyone experience that one?

WEs

Richard Clark <kb7qhc@attbi.com> wrote:

>Act before July 1st to preserve your privacy.
>
>Hi All,
>
>Subject: Your Credit: Personal Information goes public
>
>Starting July 1st, 2003, the four major credit bureaus in the US
>(Equifax,etc) will be allowed to release credit info, mailing
>addresses, phone numbers, etc., to ANYONE who requests it. If you
>do not want to be included in this release of your personal
>information,
>
>you can call 1-888-567-8688.
>
>Once the message starts
>you will want option #2 - wait for the long silence to offer it!!!!!
>(even though option #1 refers to this email, push #2)
>
>Be sure to listen closely, the first option is only for a two-year
>period.
>
>Make sure you wait until they prompt for the option which opts you out
>FOREVER.
>
>PRACTICE this call at least once to hear the whole ball of wax
>through. The message menuing is designed to obscure your options and
>to muddy the water in their favor. It is heavily designed so that you
>take the first less protective path (note, they approach this with
>your ignorance giving them everything). Nothing will happen until you
>are prompted to speak your name, and punch in your street address to
>put the gears into place. PRACTICE this call to that point until you
>are satisfied.
>
>You should receive their paperwork in the mail confirming the "opting
>out" in less than one week after making the call.
>
>Then write your congresspeople and thank them for entitling these
>agencies to stream your private information to ANYONE (not just

>creditors).
>
>73's
>Richard Clark, KB7QHC

--
Reply to:
Whiskey Echo Sierra Sierra AT Gee Tee EYE EYE dot COM
Lycos address is a spam trap.

4358. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 22:55:44 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <QX3La.37694$3d.20179@sccrnsc02>
Source record: 34510

> So, I guess, having a filter I must evaluate the characteristic
> impedance of the filter, to match it properly. But I've not found any
> formulas including characteristic Z, I could only choose either constant
> capacitances or resistances, and having a given frequency I could
> compute R's and C's. If you'd direct me where I might find formulas
> including Z(char.) I would be very graceful, or how to read out the
> Z(char.) from the values of R's and C's of the filter.

Go to the WB6BLD website and download the student version of Elsie. Run the capacitor input LPF program but you'll need the termination impedances to complete the design. You get the cart before the horse not specifying the impedances first. I suppose you might effect a design with some specified impedance and then repeat that with another impedance and home in on whatever numbers you have for components, but there are a myriad component values that will yield the same transmission results, not sure you'd ever get there from here.

W4ZCB

4359. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 22:57:41 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <vfpiv5hvv0jse2@corp.supernews.com>
Source record: 34511

Actually, passband ripple is a design characteristic of all Chebychev filters. How much ripple is designed in just as much as the cutoff frequency. So if you want less ripple, specify that in the design.

If you don't want as much passband ripple but need a steep cutoff without a high order (and thus high precision and touchy) design, consider an elliptic filter which can move the zeroes to the reject band - or even have both passband ripple (which you can keep to an inaudible fraction of a dB) and in the reject band.

All of these have nonlinear group delay and ringing effects too. If that's important (example: if you will ever try to send encoded data through them), then gaussian and other phase controlled filters may be the way to go instead.

All of these can be implimented with many of the same circuits. Only the components vary. The design equations will help you there.

Filter impedance isn't the issue - the arrangement of poles versus zeroes is.

Best to you!

Jim Horn, WB9SYN/6

4360. Re: QST cancel the "right" of Equifax to reveal your credit to EVERYONE

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 23:19:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <t6kpfv4pjt3tv0qla5u9o65fsm8vh5h827@4ax.com>
Source record: 34512
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

On Fri, 27 Jun 2003 12:31:55 -0500, "SFM" <k9po@amsat.org> wrote:

>Consumers are once again being advised by the credit
>reporting industry

Another Shill.

4361. 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 23:30:06 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056756742.745757@auth2.dns.griffin.net.uk>
Source record: 34513

does anyone have info ie power output of the C&K (sofan i think) gun oscillators?? draws 120ma at 6v.
marked MA0477 B47-F2
also Racal i think gun oscillator (out of alarm unit...)
marked 012G runs at 6v draws 24ma but seems to have higher output than C&K??? C&K not knackered (i have quite a few and they all are the same..)

thanks simon G0ZEN

4362. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-27 23:54:52 UTC
From: hexter@blazenet.net
Message-ID: <vfpmackg85bg78@corp.supernews.com>
Source record: 34514

In article <1056756742.745757@auth2.dns.griffin.net.uk>, zen@lineisp.co.uk
says...
>
>does anyone have info ie power output of the C&K (sofan i think) gun
>oscillators?? draws 120ma at 6v.
>marked MA0477 B47-F2
>also Racal i think gun oscillator (out of alarm unit...)
>marked 012G runs at 6v draws 24ma but seems to have higher output than
>C&K??? C&K not knackered (i have quite a few and they all are the same..)
>
>thanks simon G0ZEN
>
Only I can say my unit marked 10vdc, and my other unit marked 9vdc
both draw around 40ma and produce a +8 dbm output.

4363. Re: Help with Roland DXY 1200 Plotter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 01:57:49 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0306271757.1d313b08@posting.google.com>
Source record: 34515

"Martins" <martins@dodo.com.au> wrote in message news:<3efb89b1@news.comindico.com.au>...
> Hi
> Can you help me out with some info
>
> I have picked up a Roland DXY 1200 Plotter with no cables
>
> The power in is on the side of plotter it has 3 pins marked 9.7v/31v dc
> (like the back of a computer supply only smaller)
> Is this the working voltage range or supply to each pin and a ground ?
>
> I have not been able to find a manual for notes for it.
>
> I hope to plot PCB with it
>
> Thanks For your time
>
> Regards
> Craig vk2zcm

Hello Craig,

let me know how you go - I have a Roland DXY1100 I want to use for the same job - one of many long term projects hi hi.

Have done a bit of research and found that
1. You need a waterproof ink in your pens (this all assumes you are going to plot directly to the board)
2. Plotter pens ran out years ago, I have a good stock of HP (roland the same) pens but use water based ink.
3. The ideal solution is to use carbide tipped pens with refillable reservoir, however have not been able to locate any, at least not in VK.
4. One possible solution (but havent tried it) is to wash out the ink from existing pens and replace - it has been suggested that the ink used for ear tags on cattle is ideal for this - will hopefully try it.

The Roland plotters seem to be 100% HP compatible, they will use the same Windows drivers anyway, so in Protel just choose the plot HP option.

73 de VK3BFA Andrew

Let me know how you go, would be interested in swapping notes so we can both arrive at a workable solution.

4364. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 03:01:31 UTC
From: averyfineman@aol.com
Message-ID: <20030627230131.04554.00000746@mb-m20.aol.com>
Source record: 34516

In article <bec993c8.0306270459.321c845a@posting.google.com>,
shoppa@trailing-edge.com (Tim Shoppa) writes:

>I a newbie to 1.5 GHz-range SMD PCB layout, so bear with me:
>
>I'm working with 1/16th double-sided FR4. Bottom side is solid ground
>plane. I've got plenty of PCB area to work with. Parts are SOT-363 (MMIC),
>SOT-343 (GaAsFET), and 0603 discretes. (I can barely solder these by hand,
>any suggestions about using parts smaller than these grain of sand things
>will be laughed at.) No through-hole parts.
>
>My circuit works, but now that I compare my design with commercial designs
>I have some questions.
>
>Question 1: What's the best way to get a low-inductance vias to the
>ground plane? Lots of small-diameter vias, or fewer large-diameter vias?
>Or is it a non-issue? Does using wire vias as opposed to plated-through
>vias help or hurt? (Obviously in a mass-production design you don't want
>wire vias, but this is a hobbyist one-off).

More smaller vias generally works out better. It won't hurt at all to use
wire vias (such as AWG 22)...and such may work better than the
deposited-electroplated vias. If the via is solder-filled, their self-
inductance decreases.

>Question 2: Would the answer to the above question change if I used 1/32nd
>FR4 instead? Obviously the 50-ohm microstrip sections would require less
>width, but I'm generally not lacking in board area. I'm thinking that vias
>in 1/32nd board must have less inductance than 1/16th board, but I lack
>a feel for the magnitude of difference. 0.3nH vs 0.6nH, maybe?

It shouldn't make any real difference on double-sided thickness
layouts or performance. Use whatever is convenient.

To position multiple vias for the ground side of bypass caps, its
better to have them in a line perpendicular to the trace line.
That is better drawn than typed, but the idea is to have the
distance from end of a capacitor to all vias the same. That way
their self-inductance would be more in a parallel fashion and
thus less.

The REAL factor in some stripline structures is the ACCURACY of
line widths both in resolution and etching...but that is mainly for
structures such as directional couplers, power dividers, and
(especially) any filters. An uncontrolled stripline width of some
impedance will show a discontinuity where the physical width

changes.

>Question 3: Does it make any sense to put ground planes on the top side of
the
>PCB in otherwise unused areas? (Assume lots of vias to the other
>side). I'm thinking about bypass capacitors for a GaAsFET source
>connection or MMIC power bypass. In particular I'm comparing NEC
>GaAsFET evaluation board
>design (where the top has ground planes in otherwise unused areas
>and the bypass capacitors go to planes) with the HP evaluation board designs
>(where they use a small upper ground "strip" connected with extremely dense
>vias to the other side).

The usual answer is the "low frequency experience" one of yes,
use as much ground plane on the hot side of the board. I'd say,
from some slight experience, that it doesn't matter if the ground
plane side is continuous.

A stripline with a continuous ground plane on one side is ideal
for the concept of "flattened-out coax" structures not having the
original two-ground-plane microstrip. One has to think in terms
of "2-dimensional coax," not in normal lower-frequency PCB
terms.

>I'm just a hobbyist looking for some advice...

Well, I've become more a hobbyist since this so-called retirement.
:-)

Len Anderson
retired (from regular hours) electronic engineer person

4365. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 03:01:32 UTC
From: averyfineman@aol.com
Message-ID: <20030627230132.04554.00000747@mb-m20.aol.com>
Source record: 34517

In article <bdhjbr$l75$1@julia.coi.pw.edu.pl>,
=?windows-1252?Q?Pawe=3F_Stobin=27ski?= <sq9nry@wp.pl> writes:

>I'm about to construct a LF filter, with cut-off frequency about 2-3kHz.
>I considered 8th order, by Butterwoth or Chebyshev approximation.
>Butterwoth looks quite well - flat passband; but Chebyshev filter has an
>improved roll-off rate. Nevertheless, the flatness is not ideal - up to
>3dB up and down in passband. Does it affect the sound quality much? Is
>it worth to obtain rough band instead of flatness?
>Thanks for any info!

Chebyshev responses can be anything in the way of ripple.
Generally, the more db ripple, the greater the stopband
attenuation.

If this is an application for speech filtering, there should be no
real problem in sound quality due to large or small ripple...the
sound quality is already altered by the cutoff frequency, any type
of filter.

Len Anderson
retired (from regular hours) electronic engineer person

4366. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 03:32:44 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3EFD0C55.8DEDD6F@bellatlantic.net>
Source record: 34518

Dominic Bines wrote:
>
> I'm looking for some large value variable caps... ATU project.
>
> 1/4" shaft.
> one twin gang (could be 3 or 4 gang actually) each section 500pF (each
> section 250pF if 4 gang)
> one independant 500pF
>
> or 3 500pF independant.
>
> smaller physically the better.
>
> 1000pF cap's might be interesting to hear about for a 160m ATU.

You don't need a 1000pF variable, just switch in a ~500pF doorknob
with your 500pF variable - but it still would be interesting to
hear about a big one!

<snip>

4367. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 06:53:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <YpQs1jDrtT$+EAZf@ifwtech.co.uk>
Source record: 34519

Avery Fineman wrote:

> If the via is solder-filled, their self-
> inductance decreases.
>
Is there any evidence for that?

I'd always understood that since the via hole is so small, it acts as a waveguide beyond cutoff, so no RF current flows through the hole. (An alternative view is to think of the groundplane as a screen - you don't get any significant RF penetration through those tiny via holes.)

If you follow the surfaces where the skin effect makes RF current flow from topside to bottom of the board, it has to be inside the board: along the underside of the top layer, down the *outsides* of the vias and onto the inside of the groundplane layer.

Where filled vias do score is when you're using them to conduct heat through the board. Many surface-mount packages for MMICs in the >100mW output range have a slug of bare metal on the underside, which is expected to be soldered to a top copper island and linked through to the underside groundplane by lots of plated-through vias. The vias around the edge of the island carry most of the RF current, while those under the package carry mostly heat. In the soldering process, the vias become filled and conduct the heat much better.

Because the top island needs to be flat for heat-sinking purposes, this kind of layout is very difficult to prototype using wire vias. Unless you can remove all the excess solder and ends of wires from the top side of the island, to allow the MMIC to sit down flat, you're pushed towards having a prototype PTH board made.

>>Question 2: Would the answer to the above question change if I used 1/32nd
>>FR4 instead? Obviously the 50-ohm microstrip sections would require less
>>width, but I'm generally not lacking in board area. I'm thinking that vias
>>in 1/32nd board must have less inductance than 1/16th board, but I lack
>>a feel for the magnitude of difference. 0.3nH vs 0.6nH, maybe?
>
> It shouldn't make any real difference on double-sided thickness
> layouts or performance. Use whatever is convenient.
>
Yes, there is a difference in inductance due to the lengths of the vias (strictly speaking it's the length/diameter ratio, but you would tend to use the same diameter of via for both thicknesses of board). The important thing is to avoid layouts where this difference is critical for performance.

> The REAL factor in some stripline structures is the ACCURACY of
> line widths both in resolution and etching...but that is mainly for
> structures such as directional couplers, power dividers, and
> (especially) any filters. An uncontrolled stripline width of some
> impedance will show a discontinuity where the physical width
> changes.
>
That's the problem with thinner board - the accuracy requirements on
line widths are doubled.

On the other hand, the width of a 50-ohm stripline on 1/32nd (0.8mm)
board is more compatible with the width of SMD components and IC pins.
You don't have to neck the striplines down to insert something like an
0805 DC blocking capacitor, and this reduces impedance discontinuities.

Also 0.8mm board is very easy to cut with light shears or even strong
scissors, and small boards are quite rigid. Many PCB makers now offer
0.8mm as a standard option.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4368. Re: Help with Roland DXY 1200 Plotter

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 10:58:48 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000044.008d3480@btinternet.com>
Source record: 34520

Hi,

If anyone is interested, Roland plotter drivers for
Windows are to be found at -

http://www.rolanddg.com/download.html

Cheers - Joe, G3LLV

4369. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 12:28:05 UTC
From: Atlas <shf@pandora.eb>
Message-ID: <pRfLa.3162$W01.356599948@hebe.telenet-ops.be>
Source record: 34521

I'll also have some gunn oscillators to play with (ex security systems)
Most of them draw around 110 mA and give 10 mW (or 10 dBm)
But there is one that draws 100 mA but gives al�most no output (measured
with spectrum analyzer....at my job)

But i think you can sssume that with 120 mA it will give between 5 and 15 mW
(looked in a catalog of gunn diodes).
Also beware that the voltage isn't to low.(e.g. 4V).You can actually destroy
your diode)

4370. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 13:20:13 UTC
From: skavanagh73@yahoo.ca
Message-ID: <347cf68.0306280520.66b7e811@posting.google.com>
Source record: 34522

Simon:

> does anyone have info ie power output of the C&K (sofan i think) gun
> oscillators?? draws 120ma at 6v.

Most 10 GHz alarm Gunns (I assume this is what you have ?) normally operate at higher voltages for optimal output (usually around 8V, where the current may be a bit less - remember it goes down with increasing voltage in as you approach the normal operating voltage). Most 8V/100mA Gunns have in the vicinity of 10mW specified output. Higher frequency Gunns often use lower voltages.

Many of these units have coupling screws which have a significant effect on the output power - I don't know if you have tried tuning them.

> also Racal i think gun oscillator (out of alarm unit...)
> marked 012G runs at 6v draws 24ma but seems to have higher output than
> C&K??? C&K not knackered (i have quite a few and they all are the same..)

I believe I have seen alarm units which use some sort of transistor or GaAsFET oscillator (rather than a Gunn diode) which could potentially be more efficient. I think that they were from C&K, but in your case perhaps the C&K uses a Gunn diode and the Racal doesn't. In the ones I saw, the "non-Gunn" consisted of a couple of parts on a very small PCB fitted with pins at each end to resemble a microwave diode package (same size as 1N23).

73,
Steve VE3SMA

4371. Re: Source of SWR Panel Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 14:32:01 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3EFDA5D4.744B1EED@gte.net>
Source record: 34523

Duncan Walters wrote:

> Does anyone know a reliable source of small panel mountable milliammeters
> (100uA - 500uA) which are ready marked with a SWR scale?
> I shall be requiring a quantity of these.
> Any assistance will be greatly appreciated.
>
> Duncan G4DFV

Hi Duncan,
While do not know a source- you might be better off to download one of the custom meter scale software programs and make your own scales- this gives you a lot of flexibility in purchasing meters. A Google search will turn up the sites.

Dale W4OP

4372. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 15:18:20 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056813644.86397@auth2.dns.griffin.net.uk>
Source record: 34524

thats interesting....
the racal unit has an 6v8 zenor clamping the voltage fitted by them...it is
10ghz for sure..
ok how can i measure power out. i cant afford a spectrum analayser..

the c&k has a gun diode.(very small)....the racal unit has a larger flat
"diode" installed..maybe it is as you are discribing..
i havnt tried tuning with the screws as i assumed they are tuned for max
smoke at the factory..also the only detector i have is a mixer diode
attached to a meter/and a satcan with s meter..

simon
"Steve Kavanagh" <skavanagh73@yahoo.ca> wrote in message
news:347cf68.0306280520.66b7e811@posting.google.com...
> Simon:
>
> > does anyone have info ie power output of the C&K (sofan i think) gun
> > oscillators?? draws 120ma at 6v.
>
> Most 10 GHz alarm Gunns (I assume this is what you have ?) normally
> operate at higher voltages for optimal output (usually around 8V,
> where the current may be a bit less - remember it goes down with
> increasing voltage in as you approach the normal operating voltage).
> Most 8V/100mA Gunns have in the vicinity of 10mW specified output.
> Higher frequency Gunns often use lower voltages.
>
> Many of these units have coupling screws which have a significant
> effect on the output power - I don't know if you have tried tuning
> them.
>
> > also Racal i think gun oscillator (out of alarm unit...)
> > marked 012G runs at 6v draws 24ma but seems to have higher output than
> > C&K??? C&K not knackered (i have quite a few and they all are the
same..)
>
> I believe I have seen alarm units which use some sort of transistor or
> GaAsFET oscillator (rather than a Gunn diode) which could potentially
> be more efficient. I think that they were from C&K, but in your case
> perhaps the C&K uses a Gunn diode and the Racal doesn't. In the ones
> I saw, the "non-Gunn" consisted of a couple of parts on a very small
> PCB fitted with pins at each end to resemble a microwave diode package
> (same size as 1N23).
>
> 73,
> Steve VE3SMA

4373. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 16:24:52 UTC
From: TweetIdee <dgmason99@att99.net>
Message-ID: <ojjLa.26175$0v4.1991423@bgtnsc04-news.ops.worldnet.att.net>
Source record: 34525

"K.chattenton" <k.chattenton@btopenwold.com> wrote in message
news:bddtj8gro1@sparta.btinternet.com...
> Hi Wes,
> <clutch@lycos.com> wrote in message
> news:vfhjomji220fa6@corp.supernews.com...
> > I just picked up a IC-706MK2G and with it being 95 degrees outside the
> > thought of playing with it in the house rather than in the truck seems
> > like a fine plan. Sadly, I don't have a 20A 13.8v powersupply. Guess
> > I could buy one but it would seem that this would be a good homebrew
> > project.
> >
> > I would love to learn about shoestring homebrew solutions. Cheaper
> > the better.
> >
> > 73, wes, kc8spr
>
> One thing to remember when buying, or indeed home brewing a power supply
is
> that if you develop a fault on the pass transistors is you will cause an
> high voltage to appear at the output terminals (this could be as high as
27
> volts, or more in some cases) so it is always best to have built in, or
> build in protection against this happening.
> Other things to consider regards protection are, under voltage protection,
> short circuit protection, current limiting (not always required) and
soft
> start (helpful if using a toroid type transformer).
> I would never consider building a cheap power supply without all the
> protection I could build into it, it's just not worth it when you consider
> the price of the equipment you have connected to it.
>
> Hope this helps a little, cheers, Ken, G4KIR.
>
>

Bob, KE6F is selling switchmode power supplies on Ebay. He's got bunches of
5V/20A supplies, selling in lots of 6 at $40.00. As he suggests in his Ebay
ad, you can arrange them in series/parallel and get a 13.8V supply at 40A.
They are somewhat adjustable ove about a 10% range, and they do indeed crank
out the power. I bought a set from him last year, and have them set up for
a bench supply. I have a switching arrangement that allows me to set them
up in series/parallel combinations that give me combinations of 5V/120A to
30V/20A. His latest offering ends today at 19:43 PST
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3032552663&category=4671.

Great price and you'll have plenty of power.
--
Tweetldee
Tweetldee at att dot net (Just subsitute the appropriate characters in the address)

Time is what keeps everything from happening all at once.

4374. Re: Source of SWR Panel Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 18:53:17 UTC
From: "G.Beat" <nospam@attbi.com>
Message-ID: <xulLa.45106$nG.46351@rwcrnsc51.ops.asp.att.net>
Source record: 34526

"Duncan Walters" <pentode@ntlworld.com> wrote in message
news:%q2La.730$sh4.79519@newsfep2-win.server.ntli.net...
> Does anyone know a reliable source of small panel mountable milliammeters
> (100uA - 500uA) which are ready marked with a SWR scale?
> I shall be requiring a quantity of these.
> Any assistance will be greatly appreciated.
>
> Duncan G4DFV

Duncan -

IF you are purchasing a large quantity - some mfg. with do this for you
for a graphic or "set-up" charge.

First, select a meter that is well supported for your application.

In the USA, the 2 manufacturers that I consider first for analog meters is:

Simpson Electric, Elgin, IL
http://www.simpsonelectric.com

Hoyt Electrical Instrument; Penacook, New Hampshire
http://www.hoytmeter.com

Here are web sites for customizing analog meter faces:

KR6LP's approach
http://www.qsl.net/kr6lp/meter.html

K8CU - from his QST article - on the subject
http://www.realhamradio.com/Meter.htm

W9GB

--
Do not use Reply (spam logger & catcher).
Reply only through ARRL forwarding service to W9GB

4375. FS: TUBES, radio, TV & special purpose, all at very low prices.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 21:14:01 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <nwnLa.56216$1e.38176@fed1read04>
Source record: 34527
Cross-posted to:
rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please email w6krc@arrl.net for a detailed list.

4376. Re: AD9852 / AD9854 DDS instability?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 21:49:57 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <m03sfvcr5582uu4rci34245o5ffrff2gi7@4ax.com>
Source record: 34528

On Mon, 23 Jun 2003 11:26:57 +0100, c.a.m@antijunk3.blueyonder.co.uk
wrote:

>
>>AD only send samples to an address in the USA . By having it sent to a US
>>address I received a sample of 4 RF Log Amps.
>
>I'm in the UK and I managed to get 2 RF log amp samples from AD no problem, sent
>straight to my door. However, I can't remember who it was I spoke to to get
>them, was a year ago.
>
>I'll have a nosey.
>
>Clive
There is no geographical restriction on samples.
See http://www.analog.com/productSelection/orderSamples/index.html

for instructions and one-time registration.

The devices that we offer (up to of any device) as samples
can be checked via the "Product Category Tree" at:
http://www.analog.com/Analog_Root/sitePage/productCategoryTree/

In the DDS section, none of the AD995x series are ticked yet - so no
samples yet being issued ecept to "lead customers" etc.
Quite often new/unreleased parts may not appear in the list of
available samples.

73 de Chris Muriel, G3ZDM

4377. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-28 22:50:56 UTC
From: averyfineman@aol.com
Message-ID: <20030628185056.12501.00000509@mb-m04.aol.com>
Source record: 34529

In article <YpQs1jDrtT$+EAZf@ifwtech.co.uk>, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> writes:

>Avery Fineman wrote:
>
>> If the via is solder-filled, their self-inductance decreases.
>>
>Is there any evidence for that?

Not that I can reference in here, only stored in old notebooks at
Teledyne Electronics and RCA Corporation. :-)

>I'd always understood that since the via hole is so small, it acts as a
>waveguide beyond cutoff, so no RF current flows through the hole. (An
>alternative view is to think of the groundplane as a screen - you don't
>get any significant RF penetration through those tiny via holes.)

The operating frequency is mentioned as 1.5 GHz. For the average
via, the cutoff frequency would be well up into the tens of GHz.

When I've been mentioning "vias," I've been thinking of the through-
hole which is also plated-through to both sides. A plain hole through
to me is just a hole. :-)

>If you follow the surfaces where the skin effect makes RF current flow
>from topside to bottom of the board, it has to be inside the board:
>along the underside of the top layer, down the *outsides* of the vias
>and onto the inside of the groundplane layer.

Sorry, I'm not going to "follow it" that way. Having already been
through the mills and ground down, I treat the ENTIRE structure
within the enclosure as a cavity resonant at several frequencies
depending on the mode and location of excitation.

On a detailed level on a stripline (presuming "stripline" refers to
one groundplane on one side, the other type having groundplane
on both sides being "microstrip"), there's a rather complex EM
relationship which takes into account both the substrate dielectric
AND air, the substrate dielectric thickness, the copper foil thick-
ness, and the trace widths. That gets to be one #$%@^&!!!! mess
to calculate each time and I would take the much easier route -
use already-determined trace dimensions according to manu-
facturers' dielectric constant values and thickness and copper foil
dimensions.

There's a number of quite complex activities going on in any
stripline structure in everything from coax connector interfaces to

directional couplers to multiple-trace filters. That's lovely in the classroom but practically, it is much easier to just DO the thing according to others' information on how to do it.

If there's any worrying to be done, think about the ENCLOSURE. When the spacings within a stripline enclosure approach a wave-length (or multiple thereof), look out. In a memorable project some 26 years ago a complete dual Rx-Tx stripline assembly was put into an enclosure about 1 wavelength by 2 wavelengths. The results when enclosed didn't at all agree with what was carefully measured when the stripline was mounted in the open. At least four people, all of them rather experienced, blew it on not recognizing the resonances that could be set up several months ahead of time. [I did the overall stripline layout and couplers, dividers, and combiners] That included the chief engineer who led the regular design reviews. We cured the resonance effects by cementing in a thin layer of Emerson & Cuming "Echosorb" material...luckily there was still enough space within the enclosure. The absorber damped out some curious coupling paths due to resonances. It worked fine after that in the 0.9 to 1.2 GHz military IFF band.

>Where filled vias do score is when you're using them to conduct heat
>through the board. Many surface-mount packages for MMICs in the >100mW
>output range have a slug of bare metal on the underside, which is
>expected to be soldered to a top copper island and linked through to the
>underside groundplane by lots of plated-through vias. The vias around
>the edge of the island carry most of the RF current, while those under
>the package carry mostly heat. In the soldering process, the vias become
>filled and conduct the heat much better.

Offhand, I'd think you worry a bit too much about heat. First off, if you have a high heat condition, what is the thermal resistance of the PCB material itself? Chances are it is lower than folks first realize. If there
are hotspots, such as a power transistor, why doesn't it have its own very low thermal resistance mounting to the baseplate? Okay, then, what is the comparative thermal resistance of an ordinary via made with normal methods versus the same one filled with solder?

Okay, where is the qualification in this case that "vias at the edge of the island carry the most current?" I've not seen the layout. Have you? Are the islands square, round, one trace going out or several? The analysis of RF currents in any simple stripline structure are sufficiently complex that answers to those questions need a commercial (expensive) EM analysis program. Actually, I think the "questions" raised are moot and not really needed...going off after a question quest for answers will probably exceed the ordinary project time manyfold.

>Because the top island needs to be flat for heat-sinking purposes, this
>kind of layout is very difficult to prototype using wire vias. Unless
>you can remove all the excess solder and ends of wires from the top side
>of the island, to allow the MMIC to sit down flat, you're pushed towards

>having a prototype PTH board made.

Sigh...if you've got a plated via and you need some heat transfer to
the ground plane side, just fill it with solder and be DONE with it.

Anyone mounting "large" SOT-23 packages with direct wire from the
component side leads to the groundplane should think twice. Leads
from that and the usual MMIC packages need some PCB trace to
solder to...to ground them directly can use a plated via or a through-
hole with wire that is soldered to the trace for the package lead.

Tiny SMT packages hold in better when the package is flat against
the board...and it is flat against the board when the leads are all as
close to the board as possible. That's a differnet situation.

>>>Question 2: Would the answer to the above question change if I used 1/32nd
>>>FR4 instead? Obviously the 50-ohm microstrip sections would require less
>>>width, but I'm generally not lacking in board area. I'm thinking that vias
>>>in 1/32nd board must have less inductance than 1/16th board, but I lack
>>>a feel for the magnitude of difference. 0.3nH vs 0.6nH, maybe?
>>
>> It shouldn't make any real difference on double-sided thickness
>> layouts or performance. Use whatever is convenient.
>>
>Yes, there is a difference in inductance due to the lengths of the vias
>(strictly speaking it's the length/diameter ratio, but you would tend to
>use the same diameter of via for both thicknesses of board). The
>important thing is to avoid layouts where this difference is critical
>for performance.

Yes, I'm sure there is a nice paper waiting to be written on that
subject. However, how much difference does it make in an actual
project? Can you actually measure a fractional nanoHenry
difference?!? I wouldn't bother.

To approach some reasonable accuracy on measuring via inductances
is one heckuva large project alone and the only reasonable way to
approach it is to design some simple component and measure it as
carefully as possible. Then you have a duplicate but having some of
the vias mentioned and that is measured as carefully as possible.
Then one looks at frequency, VSWR, fractional db differences, and
suchlike. Not worth it. The actual differences are too small to
matter from a practical standpoint.

>> The REAL factor in some stripline structures is the ACCURACY of
>> line widths both in resolution and etching...but that is mainly for
>> structures such as directional couplers, power dividers, and
>> (especially) any filters. An uncontrolled stripline width of some
>> impedance will show a discontinuity where the physical width
>> changes.
>>
>That's the problem with thinner board - the accuracy requirements on

>line widths are doubled.

It's roughly proportional, yes, but HOW are you going to measure
the proper line widths? You can't eyeball it with a ruler. You are
going to need a magnifier with an integral scale. Now, IF you have
an error, what is the impact on the stripline system?

If a trace width widens to 40 Ohms or narrows to 60 Ohms instead of
50, is that a terrible thing? Not really. There are probably MORE
variables from other things that lead to discontinuities which are more
severe. Let us be practical here.

The absolute finished etch dimensions will make a big difference on
things like directional couplers and filters. It won't matter a great
deal on ordinary package interconnections.

>On the other hand, the width of a 50-ohm stripline on 1/32nd (0.8mm)
>board is more compatible with the width of SMD components and IC pins.
>You don't have to neck the striplines down to insert something like an
>0805 DC blocking capacitor, and this reduces impedance discontinuities.
>
>Also 0.8mm board is very easy to cut with light shears or even strong
>scissors, and small boards are quite rigid. Many PCB makers now offer
>0.8mm as a standard option.

A practical situation is to make the layout the best one knows how,
using known ways and dimensions, trust that the substrate manu-
facturer's dimensions hold, expose the photoresist properly according to
directions, don't over-etch or under-etch. Then MAKE the thing.

Len Anderson
retired (from regular hours) electronic engineer person

4378. Re: Testing TMOS FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:08:01 UTC
From: "G.Beat" <nospam@attbi.com>
Message-ID: <B5qLa.48284$nG.47626@rwcrnsc51.ops.asp.att.net>
Source record: 34530

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030624183219.11524.00001052@mb-m13.aol.com...
> Hi,
> Anybody got a cheap and dirty way of testing mrf150's out of circuit?
My
> homebrew amp using 8 150's died, and some or all of the fets failed. At
$50 a
> pop I don't want to throw away any that have life left in them. I did the
> usual static ohmic checks in circuit, and only identified one that looked
bad.
> Also on application of dc bias, all 8 began to turn on. At very low power
> levels all 8 seemed to amplify, but with normal drive levels, no rf
output.
> These are 4 push-pull sections with 2 fets per section.
> 73 Gary N4AST

Gary -

Died? How?

I was taught that non-thermionic devices either worked
or did not. Several approaches:

A Fluke 860 is handy
http://www.hammondelec.com/gmmapp4.html

http://www.hammondelec.com/sample.html

The quickest method is a junction tester
Tom Gootee's web site (Curve tracer plans/kit)
http://www.fullnet.com/u/tomg/index.html

The major problem that I have found in solid-state amps is improper bias
OR cold/bad solder joints.

g. beat

4379. Tektronix Test Gear Setup and Leader Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:24:30 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <vfscdkabnc7i2c@corp.supernews.com>
Source record: 34531

I need to thin the herd on my test bench and it pains me to sell this but I need the cash and the room....

I have an " as new" ... I took it out of the plastic wrapper myself 5 years ago...

Tektronix TM-515 test equipment power frame. Complete with both covers (front and rear) and the tilt bail. This is the great Tek travel frame so you can safely transport and store the installed gear. Maybe a small scratch or two but I can't remember exactly where it is. These frames sold for $700+ new and Tucker has them well used for $350.

The frame will hold 5 ea single space plug-in instruments. Four instruments included.... and a Tektronix bay plate covers the empty slot (rare).

In the frame are the following plug-ins, most of these were $500 to $1000 + each when new:

DM501A - 4.5 digit DMM AC/DC/Current/dB/temperature with the temperature probe and a Fluke RF probe; last certified calibration by my local metcal lab (Fox Valley Metrology) in 2000/01- works perfectly and looks great. VERY nice and accurate... it's one of the only meters I've owned that reads my 10 Ohm lab standard exactly at the correct 10.06 Ohms....

PS503A - Triple power supply - Dual 20vdc 500 ma power supply with a static 5 vdc supply as well. Variable current and voltage for each supply. Works perfect and looks great. Checked by metcal in 2000/01. $400 alone now at Tucker !

DC504 - Frequency counter/timer 0.1 Hz to at least 80 MHz, 1 us to 999.99 s. Works perfect. One nick out of trim piece not really visable when in frame. Checked by metcal in 2001

FG503 Function Generator - low distortion sine, square and triangle waveforms. Six decade freq. multiplier steps, 1 Hz to 3 MHz. Can be swept 1000:1 with external voltage applied. Calibrated by metcal lab in 2001/02.

I think I have factory manuals for the TM515, DM501A and PS503A.... copies or parts of the manuals on the others as well.

This is a BEAUTIFUL bench set-up with about anything most of us could use.... and it's not crap but top line equipment. I'd like to see someone looking for nice gear buy it... or it's split up and off to eBay I'm afraid. I won't be giving this stuff away... too nice... I'm asking $500 plus shipping... and anyone who knows anything about this gear will tell you that it's a good deal. ... first one to say they for sure want it gets it...

http://webpages.charter.net/w9wis/ebay/tek1.jpg
http://webpages.charter.net/w9wis/ebay/tek4.jpg
http://webpages.charter.net/w9wis/ebay/tek5.jpg
http://webpages.charter.net/w9wis/ebay/tek6.jpg
http://webpages.charter.net/w9wis/ebay/tek7.jpg

Leader LTC-905 Transistor Curve Tracer.... NEW UNUSED perfect condition with manual and all cables plus the in circuit probe! I think they stopped making this 20 years ago... although it's a nice piece of test gear.

From the description in the manual:

"Curve tracing on a scope is made easy with the LTC-905. Characteristic curves of all types of semiconductors can accurately be displayed. This is far superior to the conventional ohmeter checks for quality. In circuit tests are possible for quick checks. Two inputs are provided which enable comparison of two similar devices. The LTC-905 is designed to test the following: NPN,PNP,FET and MOS FET transistors; SCR's - thyristors and triacs; Diodes - rectifier, detector, zener and tunnel"

Freq: 120 Hz
Voltage: 8 steps - 10,20,30,40,50,60,80,100 accuracy +/- 10%
Sweep waveform: fullwave rectified
Current: 100 mA max
Current limiter: 1000 ohms for low level trans
100 ohms for power transistors
Step generator Current : 7 steps - 10,20,50 uA, .1,.2,.5,1,2 mA - accuracy +/- 5%
Volts per step: .1,.2,.5 - accuracy +/- 5%
Power supply: 100,120,200,220 or 240 V 50/60 Hz 25 VA max
3.5" by 9.5" by 6.75" 4.5 lbs

http://webpages.charter.net/w9wis/ebay/ltc1.jpg
http://webpages.charter.net/w9wis/ebay/ltc2.jpg

$100 plus shipping.... I "may" still have the original box somewhere, If so I'll ship it in that. I bought this abt 6 yrs ago when a distributor went out of business here.... was NOS. eMail if interested.... or off to eBay later in the week.

Mike

--
Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - http://webpages.charter.net/w9wis/

4380. Tektronix Test Gear Setup and Leader Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:24:35 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <vfscdrh61jf2e@corp.supernews.com>
Source record: 34532

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http://webpages.charter.net/w9wis/ebay/tek4.jpg
http://webpages.charter.net/w9wis/ebay/tek5.jpg
http://webpages.charter.net/w9wis/ebay/tek6.jpg
http://webpages.charter.net/w9wis/ebay/tek7.jpg

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Freq: 120 Hz
Voltage: 8 steps - 10,20,30,40,50,60,80,100 accuracy +/- 10%
Sweep waveform: fullwave rectified
Current: 100 mA max
Current limiter: 1000 ohms for low level trans
100 ohms for power transistors
Step generator Current : 7 steps - 10,20,50 uA, .1,.2,.5,1,2 mA - accuracy +/- 5%
Volts per step: .1,.2,.5 - accuracy +/- 5%
Power supply: 100,120,200,220 or 240 V 50/60 Hz 25 VA max
3.5" by 9.5" by 6.75" 4.5 lbs

http://webpages.charter.net/w9wis/ebay/ltc1.jpg
http://webpages.charter.net/w9wis/ebay/ltc2.jpg

$100 plus shipping.... I "may" still have the original box somewhere, If so I'll ship it in that. I bought this abt 6 yrs ago when a distributor went out of business here.... was NOS. eMail if interested.... or off to eBay later in the week.

Mike

--
Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - http://webpages.charter.net/w9wis/

4381. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:27:58 UTC
From: shoppa@trailing-edge.com
Message-ID: <bec993c8.0306281627.332ae9d7@posting.google.com>
Source record: 34533

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<YpQs1jDrtT$+EAZf@ifwtech.co.uk>...
> Avery Fineman wrote:
>
> > If the via is solder-filled, their self-
> > inductance decreases.
> >
> Is there any evidence for that?
>
> I'd always understood that since the via hole is so small, it acts as a
> waveguide beyond cutoff, so no RF current flows through the hole. (An
> alternative view is to think of the groundplane as a screen - you don't
> get any significant RF penetration through those tiny via holes.)
>
> If you follow the surfaces where the skin effect makes RF current flow
> from topside to bottom of the board, it has to be inside the board:
> along the underside of the top layer, down the *outsides* of the vias
> and onto the inside of the groundplane layer.

I appreciate all the discussion, and this leads me to another question:
The pros who lay out consumer microwave PC boards must have some simulation
tools to tell them when the inductance to ground is "good enough", etc.,
maybe you just feed it the S-parameters for the components and it tells
you system performance (and analyzes for instabilities).

I'm presuming these tools must exist and let them lay out circuits that
aren't 90% ground plane. As a hobbyist or ham we have the luxury of
putting down a lot of copper when we aren't sure about something, but
the consumer GHz devices I've disassembled don't have any spare space!

Now, while I certainly cannot afford any of these simulation tools, I
still would like to learn what's out there. Can anyone give me some leads?

On a more primitive simulation note, I found some cool web tools that do
the textbook PC-board calculations. Like

http://www.emclab.umr.edu/pcbtlc2/

Tim.

4382. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:43:58 UTC
From: zindazenda <zen@lineisp.co.uk>
Message-ID: <1056847581.251816@auth2.dns.griffin.net.uk>
Source record: 34534

oh i cant see any components on the "pcb" diode...
"zindazenda" <zen@lineisp.co.uk> wrote in message
news:1056756742.745757@auth2.dns.griffin.net.uk...
> does anyone have info ie power output of the C&K (sofan i think) gun
> oscillators?? draws 120ma at 6v.
> marked MA0477 B47-F2
> also Racal i think gun oscillator (out of alarm unit...)
> marked 012G runs at 6v draws 24ma but seems to have higher output than
> C&K??? C&K not knackered (i have quite a few and they all are the same..)
>
> thanks simon G0ZEN
>
>

4383. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 00:54:10 UTC
From: Paweł Stobiński <sq9nry@wp.pl>
Message-ID: <bdldbi$kp5$1@julia.coi.pw.edu.pl>
Source record: 34535

I'm just looking for any info how to design an elliptical filter - as
for now I'm not going to send or receive any data, so it should be a
good solution for my project. Unfortunately I cannot find how to make a
R/C/op.amp net, having a desired cut-off frequency. Order of the filter,
I guess as high as possible to make it reasonably easy to solder :) I
have only found a ready-to-build project with calculated elements'
values, which does not satissfy me much, unless I know how to calculate
them..
Thanks to all who replied to my previous post.

--
Paweďż˝ Stobiďż˝ski, SQ9NRY
Warsaw University of Technology
Institute of Computer Science

4384. simple 3 phase circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 06:48:41 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3EFE8B8A.30404@attbi.com>
Source record: 34536

I used to have a circuit for genrating 3 phase signals using a 4017 IC
and some diodes, resistors, and capacitors. It was published in a
Electronics Design magazine back in the 80's. How ever in all of my
moves I have lost it. Does any one have a similar circuit?
Thanks, Bill Higdon

4385. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 10:20:27 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <KRwo7LDr1r$+EAZN@ifwtech.co.uk>
Source record: 34537

Avery Fineman wrote:
>In article <YpQs1jDrtT$+EAZf@ifwtech.co.uk>, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> writes:
>
>>Avery Fineman wrote:
>>
>>> If the via is solder-filled, their self-inductance decreases.
>>>
>>Is there any evidence for that?
>
> Not that I can reference in here, only stored in old notebooks at
> Teledyne Electronics and RCA Corporation. :-)
>

Snipped lots of digressions - about equally, mine and Len's - to get
back to my central point.

A typical plated-through via hole of 1mm inside diameter acts as a
circular waveguide with a cutoff frequency of about 150GHz. At
frequencies well below that, only very weak E and H fields can propagate
through the hole, which is the same as saying that negligible RF
currents can flow along its inside surface.

Since almost all the current flows down the *outside* of the plated
tube, how can filling the hole make any difference to its
self-inductance? Forgive me, but it doesn't seem to make sense.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4386. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 13:39:53 UTC
From: skavanagh73@yahoo.ca
Message-ID: <347cf68.0306290539.45116813@posting.google.com>
Source record: 34538

Simon:

> ok how can i measure power out. i cant afford a spectrum analayser..

Spectrum analyzers aren't very accurate for power anyway (typically
+/-2dB for a modern one). I suggest you try to find another ham or a
university with a power meter (or spectrum analyzer if a power meter
is unavailable) and calibrate your diode detector against that. I
don't know if there is a UK ham microwave e-mail reflector where you
could find someone nearby, but at least a few G's monitor the WA1MBA
reflector (see www.wa1mba.org). Best to have an isolator or
attenuator in front of the as waveguide diode detectors generally are
not well matched.
>
> i havnt tried tuning with the screws as i assumed they are tuned for max
> smoke at the factory

Not necessarily. They may also have considered frequency stability,
and if there is a mixer diode integrated in the unit, the oscillator
power coupled to the mixer diode. Make sure you have a way of
measuring frequency before you tune the cavity tuning screw, however !

73,
Steve VE3SMA

4387. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 15:26:27 UTC
From: Floyd Davidson <floyd@barrow.com>
Message-ID: <87isqovra4.fld@barrow.com>
Source record: 34539

"zindazenda" <zen@lineisp.co.uk> wrote:
>thats interesting....
>the racal unit has an 6v8 zenor clamping the voltage fitted by them...it is
>10ghz for sure..
>ok how can i measure power out. i cant afford a spectrum analayser..

You might consider looking for an older model HP microwave power
meter. They can be picked up for relatively little, and are
significantly more accurate than a spectrum analyzer.

A quick check on eBay showed occasional prices below $100 for
servicable HP 432, 435B and 436A power meters, though they also
sometimes fetch prices significantly higher than that!

I'm sure there are other brands too, but those are meters that
I've used and am familiar with.

--
Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

4388. Andersen Powerpoles in a marine environment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 19:26:05 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.19695bb5bfa9dd639896c5@News.CIS.DFN.DE>
Source record: 34540
Cross-posted to: rec.boats.electronics,rec.radio.amateur.homebrew

My father in law is using a soft hull inflatable (Zodiac) for fishing in summer in the Mediterranean. He has an outboard, a small 12V battery and a fish-finder. The cabling is very flaky and I'd like to set him up with something better.
As he is removing all equipment from the boat all stuff needs to be disconnectable. I'd like to Andersen powerpoles for all interconnections but don't know how these survive in a marine environment. The connectors will get wet with saltwater.

Has anyone some experience to share ?

Thanks Markus
--
Markus Baertschi Phone: ++41 (21) 807 1677
Bas du Ross&#65533; 14b Fax : ++41 (21) 807 1678
CH-1163, Etoy Email: markus@markus.org
Switzerland Homepage: www.markus.org

4389. Re: Andersen Powerpoles in a marine environment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 19:36:30 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <vfufu4a490l171@corp.supernews.com>
Source record: 34541
Cross-posted to: rec.boats.electronics,rec.radio.amateur.homebrew

Since Anderson Power Pole connectors are not water proof or even water resistant, I seriously doubt that they will fare well when exposed to salt water. My suggestion would be to check with a marine supply house. I notice that Boater's World, for example, has a variety of electrical connectors designed for marine use.

4390. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 19:36:31 UTC
From: averyfineman@aol.com
Message-ID: <20030629153631.25815.00001035@mb-m07.aol.com>
Source record: 34542

In article <KRwo7LDr1r$+EAZN@ifwtech.co.uk>, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> writes:

>Avery Fineman wrote:
>>In article <YpQs1jDrtT$+EAZf@ifwtech.co.uk>, "Ian White, G3SEK"
>><G3SEK@ifwtech.co.uk> writes:
>>
>>>Avery Fineman wrote:
>>>
>>>> If the via is solder-filled, their self-inductance decreases.
>>>>
>>>Is there any evidence for that?
>>
>> Not that I can reference in here, only stored in old notebooks at
>> Teledyne Electronics and RCA Corporation. :-)
>
>Snipped lots of digressions - about equally, mine and Len's - to get
>back to my central point.

Okay, no problem. It's become clear who needs to have the
Last Word on the subject. :-)

>A typical plated-through via hole of 1mm inside diameter acts as a
>circular waveguide with a cutoff frequency of about 150GHz. At
>frequencies well below that, only very weak E and H fields can propagate
>through the hole, which is the same as saying that negligible RF
>currents can flow along its inside surface.
>
>Since almost all the current flows down the *outside* of the plated
>tube, how can filling the hole make any difference to its
>self-inductance? Forgive me, but it doesn't seem to make sense.

I'm still wondering how waveguide below cutoff attenuator
effects are going to affect a conductive via used as a grounding
path for a component on one side to the groundplane on the
other side of the stripline board. THAT doesn't make any sense.

As far as I'm concerned...and what I've experienced in lots of
years working with stripline, most of that at the low end of
L-band, is that a wider grounding lead works better. That
grounding lead is a conductive path at the operating RF. The
less inductance in that grounding path, the better. How do I
know this?

I've never had to measure the differences in vias, filled or not.
On prototypes the "vias" tended to be just pieces of wire

going through the board, soldered on both sides. Straight connections, short as possible. If in doubt of the number, use a lot of them. The "measurement" was on the closeness of the stripline component structure as a structure to the theoretical model that was the design basis. That's fairly standard in ordinary RF work, has been so for years.

You are welcome to go into the Whichness of the What on a good model approximation of such a condition which is going to be a rather lengthy discussion that goes beyond the pragmatic situation of homebrewers trying to get things going in their home workshop.

For one-of-a-kind stripline boards, few homebrewers can afford plated-through vias on boards...although the prices are dropping from various suppliers here in the USA. "Vias" generally are just wires from one side to the other. I've never had anything disturbing about such in actual practice, either for work or as a hobby.

Len Anderson
retired (from regular hours) electronic engineer person

4391. Re: Source of SWR Panel Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 21:11:13 UTC
From: Duncan Walters <pentode@ntlworld.com>
Message-ID: <TBILa.1553$Yd3.50955@newsfep1-win.server.ntli.net>
Source record: 34543

Thanks for all the help and info, chaps.
Much appreciated.

Duncan G4DFV

4392. FA: Powerstat Variable Transformer - VARIAC

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 21:21:32 UTC
From: Carmine Prestia <cwp101@psu.edu>
Message-ID: <bdnl91$vf6$1@f04n12.cac.psu.edu>
Source record: 34544
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

All: I have a variable transformer for auction on ebay at:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2542241254&ssPageName=ADME:B:LC:US:1

Thank you.
Carmine Prestia

4393. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 21:37:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <57PEBQQUw1$+EAcN@ifwtech.co.uk>
Source record: 34555

Avery Fineman wrote:
>
> I'm still wondering how waveguide below cutoff attenuator
> effects are going to affect a conductive via used as a grounding
> path for a component on one side to the groundplane on the
> other side of the stripline board. THAT doesn't make any sense.

Quite simply, it proves that the hole doesn't do anything. Therefore making the via solid cannot change its inductance (as you had claimed).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4394. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-29 23:24:45 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3EFF76E2.E6A2372A@ieee.org>
Source record: 34545

Floyd Davidson wrote:

> "zindazenda" <zen@lineisp.co.uk> wrote:
> >thats interesting....
> >the racal unit has an 6v8 zenor clamping the voltage fitted by them...it is
> >10ghz for sure..
> >ok how can i measure power out. i cant afford a spectrum analayser..
>
> You might consider looking for an older model HP microwave power
> meter. They can be picked up for relatively little, and are
> significantly more accurate than a spectrum analyzer.
>
> A quick check on eBay showed occasional prices below $100 for
> servicable HP 432, 435B and 436A power meters, though they also
> sometimes fetch prices significantly higher than that!
>
> I'm sure there are other brands too, but those are meters that
> I've used and am familiar with.
>

And make sure that the meter has the associated cable and head. The bare
meter is frequently sold with out the power sensor and cable.

Bill K7NOM

4395. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 00:29:03 UTC
From: zindazenda <zen@ic24.net>
Message-ID: <vfv12ueop9mvfb@corp.supernews.com>
Source record: 34546

all very interesting........looking out for meter....

thanks...
"Floyd Davidson" <floyd@barrow.com> wrote in message
news:87isqovra4.fld@barrow.com...
> "zindazenda" <zen@lineisp.co.uk> wrote:
> >thats interesting....
> >the racal unit has an 6v8 zenor clamping the voltage fitted by them...it
is
> >10ghz for sure..
> >ok how can i measure power out. i cant afford a spectrum analayser..
>
> You might consider looking for an older model HP microwave power
> meter. They can be picked up for relatively little, and are
> significantly more accurate than a spectrum analyzer.
>
> A quick check on eBay showed occasional prices below $100 for
> servicable HP 432, 435B and 436A power meters, though they also
> sometimes fetch prices significantly higher than that!
>
> I'm sure there are other brands too, but those are meters that
> I've used and am familiar with.
>
> --
> Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

4396. Re: Testing TMOS FETs

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 00:31:27 UTC
From: jgboyles@aol.com
Message-ID: <20030629203127.09942.00001178@mb-m26.aol.com>
Source record: 34547

>The major problem that I have found in solid-state amps is improper bias
>OR cold/bad solder joints.
>

I think I have encountered about every problem imaginable with this amp. This turned out to be a broken solder joint in the output filter of the amp. You are right about the major problems in SS amps.
With this problem, I could adjust the bias with no problem, so the fet's appeared to amplify, but when drive was applifed, no rf output. I reached the incorrect conclusion that I had 1 or more bad fet's.
Thanks for the links.

73 Gary N4AST

4397. Re: Andersen Powerpoles in a marine environment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 00:56:44 UTC
From: M Silver <silver.mm@sympatico.ca>
Message-ID: <YULLa.557$eF3.110564@news20.bellglobal.com>
Source record: 34548
Cross-posted to: rec.boats.electronics,rec.radio.amateur.homebrew

As long as the amperage is relatively low (ie non electric start ob), I would suggest looking into using trailer power connectors. They seal pretty well but are typically only in 16 ga wire (thus the low amp issue). My 6hp outboard has a charger on it, and thats what I have been using with no apparent problems.

"Markus Baertschi" <markus@markus.org> wrote in message news:MPG.19695bb5bfa9dd639896c5@News.CIS.DFN.DE...
>
> My father in law is using a soft hull inflatable (Zodiac) for fishing in
> summer in the Mediterranean. He has an outboard, a small 12V battery and
> a fish-finder. The cabling is very flaky and I'd like to set him up with
> something better.
> As he is removing all equipment from the boat all stuff needs to be
> disconnectable. I'd like to Andersen powerpoles for all interconnections
> but don't know how these survive in a marine environment. The connectors
> will get wet with saltwater.
>
> Has anyone some experience to share ?
>
> Thanks Markus
> --
> Markus Baertschi Phone: ++41 (21) 807 1677
> Bas du Ross 14b Fax : ++41 (21) 807 1678
> CH-1163, Etoy Email: markus@markus.org
> Switzerland Homepage: www.markus.org

4398. Re: Andersen Powerpoles in a marine environment

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 02:48:54 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.null>
Message-ID: <MPG.196944f2ea8746db989925@192.168.42.131>
Source record: 34549
Cross-posted to: rec.boats.electronics,rec.radio.amateur.homebrew

In article <MPG.19695bb5bfa9dd639896c5@News.CIS.DFN.DE>,
markus@markus.org says...

> My father in law is using a soft hull inflatable (Zodiac) for fishing in
> summer in the Mediterranean. He has an outboard, a small 12V battery and
> a fish-finder. The cabling is very flaky and I'd like to set him up with
> something better.
> As he is removing all equipment from the boat all stuff needs to be
> disconnectable. I'd like to Andersen powerpoles for all interconnections
> but don't know how these survive in a marine environment. The connectors
> will get wet with saltwater.
>
> Has anyone some experience to share ?

At the risk of this sounding like a shameless plug, I would
suggest mil-spec parts rated for getting hit with water. I can think of
a couple of different inserts in the MIL-C-5015 series that are
completely splash-proof and salt-water resistant.

If your father-in-law doesn't mind dealing with a threaded
coupling on said connectors, they'd probably be ideal.

Here we go with the shameless plug (no pun intended) part: See my
page at http://www.bluefeathertech.com/connectors.html -- My local
wholesalers have most of the 5015 series in stock, so I can quote on
them (usually) very quickly.

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

4399. Re: Tektronix Test Gear Setup and Leader Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 02:52:05 UTC
From: "Dr. Anton Squeegee" <SpammersAreVermin@dev.null>
Message-ID: <MPG.196945b3dfc157d6989926@192.168.42.131>
Source record: 34550

In article <vfscdkabnc7i2c@corp.supernews.com>, w9wis@charter.net
says...

> I need to thin the herd on my test bench and it pains me to sell this but I
> need the cash and the room....

<snippety>

> This is a BEAUTIFUL bench set-up with about anything most of us could
> use.... and it's not crap but top line equipment. I'd like to see someone
> looking for nice gear buy it... or it's split up and off to eBay I'm afraid.
> I won't be giving this stuff away... too nice... I'm asking $500 plus
> shipping... and anyone who knows anything about this gear will tell you that
> it's a good deal. ... first one to say they for sure want it gets it...

I hate to be one to burst your bubble, but I had trouble moving a
very similar setup (though it didn't have the function generator) for
more than $100.00 at the last ham swap meet I was at.

If you really want to try and get $500 for it, your best bet is
going to, sadly, be Ebay. Even at that, I doubt it will go for much
beyond $300.

Just speaking from experience. I could be wrong...

--
Dr. Anton Squeegee, Director, Dutch Surrealist Plumbing Institute.
(Known to some as Bruce Lane, KC7GR, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com)
kyrrin a/t bluefeathertech dot c=o>m (Reassemble to use).
"Raf tras spintern. Raf tras spoit." (Keith Laumer, "The Galaxy
Builder")

4400. Looking for NJM2973M, please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 04:26:52 UTC
From: IT9XXS <it9xxs@tin.it>
Message-ID: <g_OLa.162109$pR3.3700706@news1.tin.it>
Source record: 34551

I am looking for this IC I still couldn't find.

It is a tiny surface-mount dual AF amplifier I must replace inside my broken c520. I need just one. Please help.

Thanks in advance,

Giovanni IT9XXS

4401. Data sheet for the UMA1010T 1.1GHz PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 05:33:58 UTC
From: markaren10@yahoo.com
Message-ID: <a430c59.0306292133.48bbb333@posting.google.com>
Source record: 34552

Hi All,

If anyone could point me at or email me a datasheet for this part I
will be very grateful.

Thanks,

Mark.

4402. Re: Looking for NJM2973M, please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 05:59:06 UTC
From: IT9XXS <it9xxs@tin.it>
Message-ID: <KkQLa.273488$g92.6398171@news2.tin.it>
Source record: 34553

Correction, the IC is * * *NJM2073M * * * (typo error)

Thanks

"IT9XXS" <it9xxs@tin.it> ha scritto nel messaggio
news:g_OLa.162109$pR3.3700706@news1.tin.it...
> I am looking for this IC I still couldn't find.
>
> It is a tiny surface-mount dual AF amplifier I must replace inside my
broken
> c520. I need just one. Please help.
>
> Thanks in advance,
>
> Giovanni IT9XXS
>
>
>

4403. Re: 10ghz gun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 06:13:23 UTC
From: Floyd Davidson <floyd@barrow.com>
Message-ID: <87of0gnldo.fld@barrow.com>
Source record: 34554

"zindazenda" <zen@ic24.net> wrote:
>all very interesting.....looking out for meter....
>
>thanks...

If you are totally unfamiliar with them, do a lot of research first. A *great* deal depends on the thermistor or bolometer head, as Bill Janssen mentioned in his response. A unit offered without one is only a good buy if you can locate a reasonably priced head for it.

If you really want to get cheap, and old tube type HP power meter from back in the '60s would work well too! That should be _really_ cheap. The biggest problem with them was the temperature drift was so fast that calibration was difficult.

--
Floyd L. Davidson <http://web.newsguy.com/floyd_davidson>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

4404. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 12:49:07 UTC
From: shoppa@trailing-edge.com
Message-ID: <bec993c8.0306300449.2752604f@posting.google.com>
Source record: 34556
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20030628185056.12501.00000509@mb-m04.aol.com>...
> In article <YpQs1jDrtT$+EAZf@ifwtech.co.uk>, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> writes:
> >Where filled vias do score is when you're using them to conduct heat
> >through the board.

Is a solder-filled via sometimes known as a "thermal"? I've seen that
term a couple of times and when I think of it as you just described it
then the term makes sense.

> >The vias around
> >the edge of the island carry most of the RF current, while those under
> >the package carry mostly heat. In the soldering process, the vias become
> >filled and conduct the heat much better.
>
> Okay, where is the qualification in this case that "vias at the edge of
> the island carry the most current?" I've not seen the layout. Have
> you? Are the islands square, round, one trace going out or several?
> The analysis of RF currents in any simple stripline structure are
> sufficiently complex that answers to those questions need a commercial
> (expensive) EM analysis program. Actually, I think the "questions"
> raised are moot and not really needed...going off after a question quest
> for answers will probably exceed the ordinary project time manyfold.

Sorry if my questions went into esoterica rather than mainline. My questions
were almost entirely inspired by the differences in NEC vs HP (err, um,
Agilent) MMIC and GaAsFET evaluation board layouts. If the differences
are aesthetic rather than practical then I'll gladly drop the question.

> Then MAKE the thing.

I agree with you there :-). I hope to make more things soon!

My big problem is that while I have been succesful at making my own
SOT-23 patterns on PC boards at home (either photographically or by
knife), I have real difficulties with the SOT-363's that dominate today's
mass-produced parts and so far have been having expresspcb.com make
those for me. When I try to etch the SOT-363 pattern I either get too
much undercutting or don't fully etch out the tiny strips between leads.
ExpressPCB only does 1/16" FR4, but plated vias come for "free".

Tim (KA0BTD).

4405. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 15:15:17 UTC
From: mcalhoun@ksu.edu
Message-ID: <bdpk65$d7j@unix1.cc.ksu.edu>
Source record: 34558

>I just picked up a IC-706MK2G and with it being 95 degrees outside the
>thought of playing with it in the house rather than in the truck seems
>like a fine plan. Sadly, I don't have a 20A 13.8v powersupply....
>I would love to learn about shoestring homebrew solutions....

I've run my entire 'shack from 12-volt car (and other) batteries for about 20 years. For charging I've used home-made chargers, a "float charger" (few hundrew mil's at most; $7.50 on sale from Harbor Freight) and a WalMart "battery maintainer" (1 or 1.5 amps, I don't remember; about $25), depending on how much/often I operate.

Many will scream "Don't use or charge batteries in your house", but don't listen to them! My local Hospital uses batteries by the dozen indoors, and I suspect yours does, too. I know because they give them to me when they swap them out from their portable X-ray machines, etc., every year. (After checking them out and sending those which won't hold a charge to the recycle place, I pass the good ones on to hams in this area). While they wait in my garage, I keep them "topped off" with Harbor Freight float chargers. Right now I have about a half-dozen 12-volt 26 amp-hour and two ONE-HUNDRED-TWENTY-volt, 4 amp-hour batteries (the latter are made of 20 6-volt batteries) waiting for takers.

Last Saturday I operated my own 100-watt Field Day in my grandkids' front yard using one of the 26 amp-hour batteries; even with four sub-harmonics all wanting to "help" me tune the radio, I contacted 32 states (my personal goal is maximum STATES, not contacts) in about five hours of operation using a ground-level automobile whip with radials.

(The above was also emailed to the original poster.)

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4406. Re: Direct Conversion Receivers??

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 15:16:25 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <bdpk8a$vdj29$1@ID-61331.news.dfncis.de>
Source record: 34557

"Dick" <boleyd@yahoo.com> wrote in message
news:wluJa.4781$Hw.3990199@news2.news.adelphia.net...
> Does anyone have any first-hand experience with sophisticated direct
> conversion receivers. The ones that actually suppress the opposite
sideband.

See: http://www.hanssummers.com/radio/polyphase/index.htm

>
> Dick N3HKN
>
>

4407. Re: Which is the lower-inductance way of doing via's?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 15:35:31 UTC
From: John Larkin <jjlarkin@highlandSNIPtechTHISnologyPLEASE.com>
Message-ID: <vrl0gvkfqmn24jn7clguble822hi1rt5v3@4ax.com>
Source record: 34559
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 30 Jun 2003 05:49:07 -0700, shoppa@trailing-edge.com (Tim Shoppa)
wrote:

>averyfineman@aol.com (Avery Fineman) wrote in message
news:<20030628185056.12501.00000509@mb-m04.aol.com>...
>> In article <YpQs1jDrtT$+EAZf@ifwtech.co.uk>, "Ian White, G3SEK"
>> <G3SEK@ifwtech.co.uk> writes:
>> >Where filled vias do score is when you're using them to conduct heat
>> >through the board.
>
>Is a solder-filled via sometimes known as a "thermal"? I've seen that
>term a couple of times and when I think of it as you just described it
>then the term makes sense.
>

No. A thermal via or pad is a pad that is located in, and connected
to, a plane, but there's an insulating ring that separates the pad
from its plane, with 3 or 4 small conductors, "spokes", crossing the
ring and making the electrical connection. The idea here is to reduce
the heat transfer from the pad to the plane, to make soldering easier.
This also increases inductance and, of course, thermal resistance.

Thermals aren't really needed, especially for surface-mount boards or
any boards that are soldered in a reflow oven, where everything gets
hot.

John

4408. Re: LF op. amp. filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 16:38:12 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3F006892.E2D6FC41@rica.net>
Source record: 34560

Pawe³ Stobiñski wrote:
>
> I'm just looking for any info how to design an elliptical filter - as
> for now I'm not going to send or receive any data, so it should be a
> good solution for my project. Unfortunately I cannot find how to make a
> R/C/op.amp net, having a desired cut-off frequency. Order of the filter,
> I guess as high as possible to make it reasonably easy to solder :) I
> have only found a ready-to-build project with calculated elements'
> values, which does not satissfy me much, unless I know how to calculate
> them..
> Thanks to all who replied to my previous post.
>
> --
> Pawe³ Stobiñski, SQ9NRY
> Warsaw University of Technology
> Institute of Computer Science

While this site does not give you specific formulas to solve, I think
you will find it interesting and helpful.
http://ldsg.snippets.org/FILTERS/Cuadra/elliptic.php3

--
John Popelish

4409. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 21:38:20 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <JRK$EWYM3KA$EwEu@philstheboss.freeserve.co.uk>
Source record: 34561

>> 1/4" shaft.
>> one twin gang (could be 3 or 4 gang actually) each section 500pF (each
>> section 250pF if 4 gang)
>> one independant 500pF
>>
>> or 3 500pF independant.
>>
>> smaller physically the better.
>>
>> 1000pF cap's might be interesting to hear about for a 160m ATU.
Jackson Bros are now owned by Mainline here in the UK.

They have a page up on the web showing most of their variable cap range.

However, their 4-gang 2000pf unit is not listed. I know, I'm after some.

I just tried finding the page but it's evading me right now.

750v working voltage seems to spring to mind.

Let me know what else you find as I am interested.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4410. Re: Source of SWR Panel Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 21:39:24 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <IRa$EuYM4KA$EwkJ@philstheboss.freeserve.co.uk>
Source record: 34563

Duncan,

>Does anyone know a reliable source of small panel mountable milliammeters
>(100uA - 500uA) which are ready marked with a SWR scale?
>I shall be requiring a quantity of these.
>Any assistance will be greatly appreciated.
Zetagi make these, cheap.

Not sure who the UK rep is right now.

Do a search for the Italian company and back track.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4411. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 21:48:41 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3f00b026$0$48916$edfadb0f@dtext02.news.tele.dk>
Source record: 34562

Hello Philip

> I just tried finding the page but it's evading me right now.

It is here
http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm#catalogue

Regards Max

4412. Re: Large value variable cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 21:59:32 UTC
From: Max <Max_Jens@post9.tele.dk.invalid>
Message-ID: <3f00b2b1$0$48901$edfadb0f@dtext02.news.tele.dk>
Source record: 34564

Hello Philip

> However, their 4-gang 2000pf unit is not listed. I know, I'm after some.

You can have one made for you at
http://www.dh7pm.de/index.html

Regards Max

4413. Re: Tektronix Test Gear Setup and Leader Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 22:05:23 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <vg1d5jdenb209b@corp.supernews.com>
Source record: 34565

Already sold at the asking price...

Mike, W9WIS

4414. Re: Yet another powersupply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2003-06-30 22:29:54 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <u9e1gvs08m5l9m44fi11fduk4f6vt30qpo@4ax.com>
Source record: 34566

On 30 Jun 2003 10:15:17 -0500, mcalhoun@ksu.edu (mcalhoun) wrote:

>Many will scream "Don't use or charge batteries in your house", but don't
>listen to them! My local Hospital uses batteries by the dozen indoors,
>and I suspect yours does, too. I know because they give them to me when

There is a big difference between a lead acid battery as used in cars,
which can give off acid fumes or leak, and a gelcell battery, as used
for indoor industrial uses, such backup power for emergency lights,
computer systems, etc.

Gel cells are fine indoors, as long as you do not over heat or over
charge them.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom